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NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

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ORIGINAL COMMUNICATIONS.

LACERATION OF THE CERVIX UTERI.

READ BEFORE THE MEDICAL SOCIETY OF NORTH CAROLINA, AT ITS TWENTY-FOURTH ANNUAL MEETING—Salem, N. C., May 1877. By JOSEPH GRAHAM, M. D., Charlotte, N. C.

AMONG the many causes of uterine disease following parturition, perhaps none is more common than this accident—none more easily recognized by those familiar with it, nor more frequently overlooked by the uninitiated.

In the year 1874, during a visit to New York, my attention was first called to it by Dr. Thomas Addis Emmet, Surgeon to the Woman's Hospital of that city, to whom belongs the honor of having first recognized its importance as a factor in uterine disease, and suggested to the profession an operation for its cure.

Although nearly twelve years had already elapsed since the discovery, nothing had yet been published concerning it, either at home or abroad; but in November of that year that gentleman, in an excellent article in the *American Journal of Obstetrics*, set forth his experience at length.

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Medical Society of the county of New York, Dr. Sims, being present, attested his high appreciation in the following emphatic language, viz: "There can be no objection, no opposition to the operation. We must accept it as Dr. Emmet has given it to us. We cannot modify the operation; we cannot change it; we cannot improve it, for it is perfect—perfect in its method and perfect in its results."

Notwithstanding the eulogistic endorsement of this distinguished leader in gynæcology, the profession have been slow to adopt his sentiments. And no author with whom I am familiar, either foreign or domestic, has even described the *operation*, or appears, as yet, to attach a worthy significance to the injury itself, simply, I am persuaded, for want of recognition, mistaking it for some other trouble, such as a patulous os granular erosion of the cervix (so-called ulceration) of a very intractable form, and even sometimes, it may be, for an epitheliomatous condition.

The chief cause of this failure of recognition, I conceive to be *the position* which patients are generally required to assume while undergoing physical examination, as well as the *kinds of specula* almost in universal use, not only by the profession at large, but also by the great majority of special practitioners of this art, both in Europe and America.

To those most familiar with the lesion, it is possible very frequently to arrive at a correct diagnosis by aid of the vaginal touch alone; but without a Sims' speculum, or some of its modifications, and the patient in the left semi-prone, or, in some very *doubtful* cases, the knee-elbow posture, it will be impracticable to so expose the cervix uteri as to make the injury distinguishable by the eye.

Any quarter of the cervix is liable to become the site of a laceration; hence we have the following varieties: anterior, posterior and lateral, which list may be subdivided into unilateral and bilateral. And again, they may be *complete* or *partial*, the former extending through the entire length of the neck, between the two ora uteri, and the latter compromising its integrity, to a variable extent, short of these limits. The injury through the anterior lip, Dr. Emmet tells us, is the most frequent, but least often met with as a cause of disease. The woman, after confinement, being detained in bed for some time, if the lesion is in the median line, the flaps will be retained in apposition by the lateral pressure of the vaginal walls, and tend to heal, especially if the vagina be frequently cleansed (as it should always be after parturition) with injections of warm water, to which has been added a small quantity of carbolic acid and glycerine. Unless the fissure through the posterior lip shall have extended into Douglas' *cul-de-sac*, when much inflammation will usually follow, quick and spontaneous union will generally take place—often so perfect as to leave scarcely a line to mark its location.

In the autumn of 1876 a lady was sent to me from a neighboring county with a very marked case of the worst form of fissure in this locality, accompanied by a very troublesome retroversion, for the latter of which, together with a supposed "extensive ulceration," she had been very unsuccessfully treated. Her ill-health had supervened upon a hard labor, which had been terminated by instrumental delivery three years prior to my seeing her. During all this long interval she had been almost constantly confined to her bed. Upon examination, the cervix revealed a *rent* in the posterior lip extending to the vaginal junction, and beyond this a cicatricial band marked the course of the fissure, which had entirely traversed the posterior *cul-de-sac*.

A violent cellulitis had been a sequel of the lesion, and the cicatrix had so contracted as to form a stout cord, which afterwards interfered very materially with the adjustment of a suitable pessary for the relief of the displacement.

After the requisite amount of general and local preparation, the fissure of the neck was closed, according to Dr. Emmet's plan (to be presently described) and healed beautifully, and with after-treatment suited to her general condition, she was soon restored to health, and has not suffered a relapse.

But it is with the *lateral* lacerations we shall have oftenest to contend as causes of uterine disease. On account of their peculiar locations, the flaps cannot be kept sufficiently in apposition to insure healing during the early days after confinement; and so soon as the woman begins to walk about, the heavy uterus, in a state of subinvolution, with weakened supports, begins to sink down in the pelvic cavity, and as it settles the posterior lip is caught on the posterior vaginal wall, while the anterior is driven on, by the weight of the organ, in the axis of the vagina, separating the flaps wider and wider, thus keeping up, by friction, a constant fretting of the raw surfaces, from which a sleeplessness, nervousness and utter wretchedness is produced, which can be better imagined than described.

Soon after labor the cervix, together with the body of the organ, is undergoing fatty degeneration, and the soft lips become flattened against the opposing surfaces: ; and if the injury is bilateral, extending up to, or beyond, the vaginal junction, the mucous membrane of the canal of the cervix rolls out, and the lips become everted, and we have what is oftenest mistaken for an extensive "ulceration," so-called. Should this character of lesion have existed for some time, the mucous follicles of the cervix become affected, and cystic degeneration, with its little, round, hard bodies, studded through the tissues, supervenes. The cervix will also appear, upon examination by the touch, as if constricted about the vaginal junction, and much broader below ; thus acquiring a shape which has been very aptly likened, by Dr. Emmet, to an inverted trumpet.

With these broad, flattened lips, in a state of granular erosion or cystic degeneration, and the cervical endometrium congested and everted to such an extent as to interfere seriously with the circulation below the os internum, the form of the cervix is so changed as to leave but little trace of the laceration, and the lesion would be scarcely recognized by the inexperienced eye.

In unilateral laceration, extending the full length of the cervix, the mucous membrane will be everted to a greater or lesser extent, but decidedly less than in the bilateral form.

This is the condition most frequently encountered, and described as "*patulous os* ;" and many, no doubt, while endeavoring to pass the uterine sound or probe into the *centre* of this opening, have been struck with the fact that it would only enter the canal, after sliding down to one angle. Whereas, if this were truly an open or enlarged os, the probe would pass more readily at the centre than elsewhere.

Let the patient now assume the position on the left side, and the cervix be exposed by means of a Sims' speculum, in the hands of an assistant, and if you draw together, with tenacula, the two sides, you will find the instrument entering, without obstruction, directly through the centre of the opening. During this procedure, it will also be observed that not only the apparent size of the os, but also of the whole cervix, will be materially diminished, and the normal outlines will be sufficiently restored to give convincing proof of the character of the existing lesion. Previous to the time when my attention was first called to lacerations of the cervix uteri as a cause of disease, when I began to use Sims' speculum in every-day practice, I had been much perplexed with this problem of the canal not being *constantly* found in the centre of this "capacious os."

I remember now a very striking case of this kind, with the flaps in a granular condition, which was treated by me ten or twelve years since, and relieved, by rest in the recumbent posture, local alteratives, etc., etc.; but which would always relapse soon after the patient resumed exercise on foot. After one of these courses of treatment, and for the relief of an accompanying prolapsus, I placed a circular, hard rubber, concave pessary, with a small central opening, with the hope of preventing her wonted relapses. In this I was successful, without being aware of the true reason, which was this: The pessary, resting against the front of the cervix, lifted the organ in such a way as to keep the flaps together and produce a partial anteversion, thus removing the constitutional disturbance which had been so long kept up by the friction of the raw surfaces against the vagina.

This lesion is a most fruitful source of subinvolution and chronic congestion. And some of the most intractable hemorrhages encountered within the month succeeding parturition, followed, perhaps, by menorrhagia and metrorrhagia, are due to these lacerations, and in many instances the blood issues directly from the lips of the wound.

Almost, indeed, I might say, the whole of the *written* history of this lesion, as a cause of uterine disease and its corresponding operation, is confined to Dr. Emmet's able paper, with only an occasional allusion to it in the published proceedings of some New York Society, by some gentleman accustomed to frequent his instructive clinics at the New York State Woman's Hospital. Consequently I have been obliged to draw largely, in describing the accident, upon what he has so ably given us, and shall do so still further when I come to detail an account of the operation. But in so doing I here cheerfully disclaim any desire or intention of appropriating *one tithe* of that meed of praise which is so justly his. My whole purpose will have been fully subserved if my efforts shall prove the means of bringing any to a full understanding of this important subject.

The accident having but so recently been recognized as a cause of disease, statistics are wanting to establish its exact frequency.

Dr. Emmet says "lacerations of the cervix are of frequent occurrence;" but I do not remember to have seen any precise calculation from him.

I have seen it estimated by some gynæcologist that *fifty*, by another that *forty*, and my own observation warrants me in the belief that at least *thirty* per cent. of all the *intractable* forms of granular erosion, congestion and areolar hyperplasia, with their depending displacements and constitutional sympathies, following parturition in multiparous women, are not only *due* to this accident, but will also constantly relapse, until it shall have been remedied by the proper operation.

This estimate will doubtless appear excessive to most practitioners, which is not at all surprising, in consideration of the fact that not more than one in fifty have ever, or would now, recognize a laceration, but would mistake it, as I have frequently done, for a resulting granular erosion; and this can scarcely be wondered at, when such men as Sims and Emmet, with abundant daily opportunities, did not discover it until so recently.

Dr. Emmet's first case was one of double lateral laceration, which had been under Dr. Sims' care, with himself as assistant, and treated for *granular erosion* of a very obstinate form, for a period varying from twelve to eighteen months. Whenever the erosion was healed and the patient set on foot again, the flaps, from friction, would take on morbid action anew, and the whole train of old symptoms reappear. Again and again this happened, till one day, Dr. Emmet tells us, while making some application to the neck, he *inadvertently* caught up the two lips, with a tenaculum in either hand, and drawing them together, was surprised to observe the outline of a cervix of nearly normal size. This procedure he repeated often enough to convince him of the reality of what he had seen, and he then devised and practised, for the first time, the operation which he afterwards published. Thus, almost accidentally, was discovered the bearing which this lesion has upon uterine disease.

The above case was operated upon in the latter part of the year 1862, and was the result of a hard, tedious labor; but the histories of many of those which I have seen show the accident to be not at all uncommon after sharp, quick ones, with violent uterine contractions. Dr. Emmet thinks the latter kind, I believe, often complicated by perineal laceration. I have not, however, found it frequent in my experience. A more common occurrence has also been noted by him after *instrumental* delivery, but he does not maintain any relation between them as cause and effect. Experience, I think, will prove only a coincidence, at least, as regards the injury in this section, where the use of instruments has not been at all common. Whatever be the cause (and I am persuaded it varies in different cases), it often follows what is known as a "dry labor," especially if the os was thin, hard and unyielding.

I have met with a number of lacerations in the last few years, and it has been my good fortune to relieve them by operation as opportunity afforded; and I recollect many others, which, previous to that time, proved very troublesome on account of relapses, but which might have been very easily disposed of had I then appreciated the cause as I do now.

Let me reiterate what I noted on a previous page, that any one confining himself to Fergusson's cylindrical, or any valvular speculum, will search in vain for examples of this lesion, for it is only by means of some perineal retractor and the patient in Sims' position, that the cervix can be exposed for ocular demonstration.

Before describing the operation proper, let us note some of the points essential to success, as well as the results to be reasonably anticipated from its performance. We can hardly find any case requiring operation which would not be benefited by some preparatory treatment, local, if not general. The duration varies from a few weeks to as many months.

The surrounding viscera, with their connective tissues, as well as the uterus itself, will be found in a state of congestion, at least, which must be removed by the use, night and morning, of vaginal injections of two or more gallons of *hot* water, from 100° to 110°.

This quantity of water will usually be sufficient to insure the contraction of the relaxed and disturbed blood-vessels, which is the object sought, and must be obtained, even if the quantity of water has to be doubled. After about seven years experience with it, I believe the following to be the best mode of using it: Let the patient be placed on her back across the bed, the hips drawn close to the edge, and the feet resting in a couple of chairs, placed for the purpose; under her head is a piece of oil or rubber-cloth, large enough to protect the bed and conduct the water used into a receiving tub below, while a bucket in one of the chairs contains the hot water for the injection, which is to be projected through a Davidson's syringe, believing that the force with which the former throws the water adds much to its efficacy. The best nozzle or pipe is made of hard rubber or wood, and the end of it should reach well up behind the cervix into Douglas' *cul-de-sac*. The heat should be maintained by adding, from time to time, hot water from a kettle, which should be at hand, and to about the last quart of water may be advantageously added a teaspoonful of carbolic acid or the same quantity of powdered muriate of ammonia, should there be much tenderness on pressure.

The uterus, usually in a state of subinvolution, sinking into the pelvis, drags on the surrounding connective tissue and obstructs the circulation. To relieve this the organ must be elevated to its normal height by means of a well-fitted pessary, which will keep it in an anteverted position, with the flaps in contact, at least; thus avoiding a source of irritation from the jutting of their edges upon the vaginal walls. Whenever the tissues are too tender for the tolerance of a pessary, I have accomplished the same result, *for a time*, by means of the daily application of dossils of cotton soaked in glycerine and borax or carbolic acid—a small one may be carried up behind the neck into the posterior *cul-de-sac*, and a longer one so placed in front as to produce as much anteversion as possible.

Alterative applications must be made, from time to time, to any granular erosion which may be present.

Cystic degeneration must be dealt with in like manner, with the addition of puncturing the distended cysts by means of Buttle's uterine scarificator, or a sharp bistoury, if this is not to be had.

The preparatory treatment should be continued till all tenderness and every trace of cellulitis has been removed from the surrounding tissues; for if any remain it will kindle afresh, and not only defeat the operation, but jeopardize the patient's life also.

The oftener I perform this operation the more I am convinced of the great importance of local and constitutional preparation on the part of the patient. This having been properly perfected, success is assured; but failure awaits the most dexterous operator who neglects it.

We endeavor to secure union by the first intention, that none of it be left to granulate: for any amount of cicatricial tissue in the cervix is badly tolerated by the female economy, often producing neuralgias and other deleterious effects.

Notwithstanding that laceration of the cervix is a very frequent cause of disease after parturition, yet we must not lose sight of the many other and concomitant causes, and be too hasty in our condemnation of the operation, should it not accomplish more than reason could justify us in expecting.

The sewing up of this rent cannot eradicate from the system disease which had existed long prior to the accident, and which, upon a close examination, would be found entirely independent of the condition of the uterus.

The general system must be looked after, and each organ interrogated as to the proper performance of its functions. In vain shall we expect to restore vigor to a depraved constitution by attending alone to the local trouble, while an impaired nutrition is depreciating the nervous forces and producing functional derangements.

Therefore we must anticipate from this valuable contribution to the surgery of the cervix, only so much as its eminent author has claimed for it—that by removing *one* very frequent, and hitherto unrecognized cause of disease, it shall accomplish much towards relieving the suffering female, and still more in preventing relapse.

The instruments required in performing this operation are: a Sims' speculum, double tenaculum, Emmet's uterine tourniquet, two single tenacula, needle-holder, shields, silver wire, needles (usually Emmet's round ones) and a pair of his long-handled, straight-edge scissors, for paring the surfaces. A scalpel may be used for this purpose, but the scissors are much preferable on many accounts. Also the carbolized catgut has been made occasionally to substitute the silver wire, but the latter possesses many advantages.

I shall now proceed to detail the operation, pretty much as originally devised by its author; for it has undergone but very little change, and that principally in the modes of fastening the sutures. The patient is placed in Sims' position and anæsthetized with chloroform or ether—I prefer the former. I have done the operation without using any anæsthetic; but few patients will bear it well or remain quiet enough to enable you to go carefully through the various steps. The cervix having been exposed by means of Sims' speculum in the hands of *one* assistant; the flaps being brought together, it is lifted up by means of a double tenaculum in the hand of another, when the instrument known as Emmet's uterine tourniquet is slipped over it, below the vaginal junction, and tightened. The object of this instrument, which consists of a stout watch-spring, passed through a canula, with the application of the ratchet of the écraseur, is to control the hemorrhage during the operation, which occasionally is excessive without it. The directions for its application, say—just before tightening the tourniquet, sufficient vaginal tissue should be drawn up through the loop and around the cervix, that the flaps may be easily approximated, while the folds thus formed render the instrument less likely to slip over the cervix, when it has become reduced in size, by the disgorgement of its blood during the operation.

To have this tourniquet properly held, keep the loop in position and prevent its slipping, is one of the greatest difficulties to be encountered. The assistant having charge of this should give his undivided attention to it. Fortunately, very many cases can be operated upon without the necessity of using this instrument, yet it is very valuable whenever required.

Having drawn down the uterus and separated the flaps, the lacerated surfaces are to be freely denuded, from one lip to the other, in a continuous strip, if possible, of uniform width, leaving a broad, untouched tract in the centre, from before backwards, which is to form the continuation of the uterine canal to the os. In freshening the edges, I always begin by removing the strip from the *lower* or anterior lip, thus avoiding much confusion from the flow of blood down upon the surface on which I am cutting, should the upper one have been pared first.

The greater the size of the neck, so much more will be the shrinkage and the broader must be the undenuded tract for the cervical canal and outlet, or they will prove too small when the parts return to their normal size.

Sometimes, on account of great thickening of the central portion, it will be difficult to make the vaginal edges of the flaps fit accurately ; when this is the case, a sufficient amount of this dense tissue, which is filled with cysts, should be trimmed off to accomplish the end.

While the tourniquet (and when one is not used, a strong tenaculum) is held by an assistant to steady the uterus, the portion of the lacerated surfaces to be removed is seized by a tenaculum in one hand, and with the scissors in the other, it is separated, care being taken, when arriving at the outer angle, just at the vaginal junction, not to wound the circular artery. Having freshened the surfaces of both fissures in the bilateral variety, and seen that the flaps can be accurately coaptated, we are ready for what is considered the most difficult step of the operation, the introduction of the sutures.

The first suture is passed through the anterior flap, close along the bottom of the fissure, entered well back, and withdrawn just at the edge of the undenuded strip, which is to form the canal ; again made to enter the opposite lip at a similar point, so as to emerge on the vaginal surface at a point corresponding to the one of entrance in the other lip. Three or four sutures are usually sufficient for each side. A little care is required in passing the one through the crown of the cervix and approximating the edges of the os.

If the sutures for both sides be passed before securing any of them, much difficulty will be avoided. An undue flow of blood may usually be checked by tightening the tourniquet, when one is used. Should this fail, twisting of the wire next to the bottom of the angle will easily control it.

In securing the sutures on the vaginal surface, I have been in the habit of using little flat shields of lead, with two holes in the centre, for the reception of the ends of the wire—one for each interrupted suture.

My friend, Dr. A. W. Knox, of Raleigh, but recently of the New York State Woman's Hospital, informs me that Dr. T. Gaillord Thomas uses a narrow strip of lead, corresponding in length to the depth of the fissure, for either side of the cervix, and in this are cut slits to receive the wires. He says, also, that the author of the operation, after his great experience, has abandoned the use of shields altogether, and drawing up the ends of each wire on a tenaculum used as a fulcrum, he bends or "shoulders" each end, at a point near the vaginal surface of the neck, and twisting them until the little triangle just above the line of operation disappears, flattens them to lie to the vaginal surface, and cuts them off a half-inch in length. He claims that by this means the operation is simplified and a smooth union of the vaginal edges can be secured, even though we may have failed to pass the sutures at precisely corresponding parts in the two flaps. If the wires have been bent so as to lie close to the cervix, and not left too long, they may remain *in situ* for an indefinite period; but they are usually removed in about eight days. In removing them it is always well to cut that part of the loop nearest to you, that it may continue to bind the lips together until it shall have been drawn entirely out. That one nearest the vaginal junction should be first cut, and should there be any tendency to gaping, the others may be left for a few days more, till union is complete. After removal of the sutures the patient should be confined to bed for at least ten days, the recumbent posture favoring the return of the organ to its normal size and the hardening of the newly united seam. If the general health will admit of it, this rule should always be adhered to. The urine should be drawn with the catheter, or a bed-pan may be used for this purpose, as well as for the relief of the bowels. But very many women are entirely unable to empty the bladder while lying on their backs; such must be attended whenever they require it, rather than allow them to rise up. No local treatment will generally be necessary beyond resuming the hot water injections, which had been suspended until after removal of the sutures, unless some vaginal discharge may have required small ones, of about a quart of warm water, with a little glycerine and carbolic acid, to insure cleanliness. Should no cause of irritation or congestion exist, the uterus will rapidly resume its normal dimensions. As in the preparatory treatment, the keeping of the uterus in an *anteverted* position, to prevent gaping and fretting of the flaps, plays such an important part, just so will it be equally essential *now* as a protection to the fresh and delicate line of union. No dragging or straining of any kind should be allowed upon it for some time, lest by absorption the new tissue be removed and the accident reproduced, either in part or as a whole. A suitable pessary should be adjusted to accomplish the end in view and lift the organ from the floor of the pelvis, until the integrity of the circulation shall have been thoroughly reëstablished and the new seam cemented.

I feel confident that when the profession shall have come to appreciate fully the relation of this accident to uterine disease, and have learned to use the operation as not abusing it, attending diligently to the constitutional and local preparation of the patient, and minutely to the *details* of the operation, as well as to a suitable after-treatment, that a new era will have dawned upon gynæcology—an era pregnant with relief for our patients—a jubilee of deliverance from meaningless cauterizations, and mistaken for a number of doubtful pathological conditions.

MILK SICKNESS—ART. 1.

By Dr. H. G. Woodfin, of Franklin, Macon county, N. C.

No apology need be offered for bringing this subject prominently before the Medical Profession, and the only diffidence to me in assuming the responsible task is my inability to present the facts of experience and observation with the clearness and force which its importance requires.

That Milk Sickness is a veritable disease—a disease *sui generis*—a well defined specific disease—is susceptible of the clearest proof. That the name is appropriate or otherwise, is of little consequence. Its history is cöextensive with the settlement and improvement of the country in the various localities where it has been known to exist. These localities are a portion of Western North Carolina, East and Middle Tennessee, Kentucky, Missouri, Indiana, Ohio, and perhaps other States. Observations in relation to it have been made by physicians and other citizens of intelligence, and from these observations many treatises have been written and published in the newspapers, as well as in the medical journals. And however vague, discordant and unsatisfactory the different theories and speculations as to the nature and *Etiology* of the disease, in the material facts and general pathological indications, they clearly concur. These are—

1st. That the poison, whatever it be, is contracted by cattle grazing in certain localities, usually well defined, and communicated to persons who use the milk, butter or fresh beef of such animals.

2d. That dogs, buzzards, etc., eating the flesh of cattle dying of the disease contract it, and with similar manifestations suffer, and perhaps die.

3d. That while the cows that imbibe the poison remain healthy, if regularly milked, their calves, as well as persons who use the milk, become sick and frequently die.

4th. That many animals may feed on the same lands and evidently partake about equally of the poison, and some of them suffer violently and die; others suffer lightly and recover, and others still, perhaps the larger number, remain quite healthy; and that the same is true of families containing several persons, all using the same diet, some are affected with the disease in different degrees of severity, while others remain healthy; and that this difference is usually, but not invariably, owing to the rest or exercise—violent exercise being the ordinary test of its existence in animals, and to a similar excitement may be frequently traced its development in persons. Beeves that have fattened in these infected localities, started to be driven to market, take the trembles and fail the first or second day, while other cattle feeding on the same grounds, left at home, remain healthy; and dogs eating the flesh of milk-sick cattle, by lying quietly during digestion, remain healthy, while others, put on the chase, or otherwise over-heated, soon sicken and die.

5th. That cattle are more subject to the disease than other animals, although horses, mules, sheep, and perhaps others, are liable to take it. My own opinion, however, is that cattle are only more liable to take it because they are more inclined to select for grazing these rich cove lands, where it is supposed usually to be obtained.

That hogs take the disease I think improbable, from the fact that they are seldom, if ever, restrained from feeding on the lands where it is supposed to be, or from eating the carcasses known to have died with the disease, and I have no well authenticated instance of a hog having the disease, or any disease resembling Milk Sickness.

6th. That the disease disappears when all the lands containing it are cleared and put in cultivation.

7th. I may add to this concurrence of material facts, that the popular errors into which the inhabitants of countries far remote have fallen, are much the same. One is that the disease prevails only in the latter summer and autumnal months; the other that the rays of the sun dissipate the poisonous matter, and the danger exists only in the morning and evening, when the dew is on the vegetation. And many of our citizens have protected themselves by keeping their cows confined until late in the morning and securing their return early in the evening, simply because they do not go far enough to get the poison; and in the other case the cattle will naturally select the warm, open lands for grazing in the early part of the season when the food is tender, in the rich, shady lands in the heat of summer and early autumn. And however successful the experiments may have proven to those who live a few miles from these infected localities, they have proved equally fatal to those who live in their immediate vicinity.

There is danger during the entire grazing season, and at all hours of the day. I have called the attention of our citizens frequently to cases proving these facts, and as far back as thirty years.

Of the topographical and geological character of the localities where Milk Sickness prevails in other States I have no satisfactory data. It has prevailed, to some extent, in all our trans-montane counties. My observation has been confined to those lying west of French Broad River, which flows through the counties of Transylvania, Henderson, Buncombe and Madison. In those counties the disease prevailed many years ago, and perhaps, to some extent, more recently. West of these lie the counties of Haywood, Jackson, Swaine, Macon, Graham, Cherokee and Clay. These are watered, respectively, by the Pigeon, Tuckasigah, Oconee Luftee, Tennessee, Hiwassee and their tributaries. These rivers have their sources in the northwestern slopes of the Blue Ridge, and flow in a northwestward direction through the narrow defiles of the Alleghany range into the State of Tennessee, thence to the Ohio river, Mississippi and Gulf of Mexico. These rivers and their tributaries are separated by mountains of no mean elevation. The table-lands of these counties have an elevation of about two thousand feet above the tide. The crests of the mountains are usually fifteen hundred or two thousand feet higher, saying nothing of their peaks and domes. The slopes from the summit of the mountains to the valleys below are of various degrees of steepness—some almost perpendicular, others beautiful inland plains. The level lands lying near large streams and the gently rolling, hilly lands, are chiefly in cultivation and contain a pretty good population, while the mountainous portions are sparsely settled. In these mountain-gorges there are many deep coves, surrounded on two or three sides so as to exclude the vertical rays of the sun, and for a portion of the year any direct influence of the sun whatever.

The disintegration of rocks from the mountain-sides and the decomposition of vegetable matter for centuries, give these coves a rich, loamy soil, producing annually a luxuriant growth of grass, weeds and vines, and heavily shaded with trees of immense size. In such localities the cattle are supposed to find the poison, whatever it be, that causes the disease called Milk Sickness. Some of these localities are quite near the densely populated valleys, but usually more remote. According to the information I have been able to procure, both during my acquaintance with the disease and for many years previous, even to the first settlement of the country by the whites, the counties of Haywood and Macon (then including Jackson and Swain) suffered more from this disease and from the loss of property than all other sections of our mountain country. From the statements of the early settlers of the country its ravages must have been fearful. And now let the reader pardon a digression. The publication of a treatise I had prepared on this subject several years ago, was suppressed lest it might prove unfavorable to immigration and to the sale of mountain lands in this country. Notwithstanding, Haywood county has made as fair improvements in her agricultural products as any other in the West, and produces more good cattle for market than any county in the State.

My first contact with this disease was in Haywood county forty-three years ago. Previous to that time it was seldom treated by physicians. But few resided in the country, and they at inconvenient distances from the infected localities. And what was still more to be regretted, they were not conversant with the disease, either from reading or observation. The idea was then popular that doctors knew nothing of the disease, and the patient would fare better in the hands of some kind neighbor than to risk the chances of sending many miles for an inexperienced physician. For several years past, however, medical aid is called for in this, as readily as in any other disease, and the physicians in all these counties meet with uniform success in its treatment. Fortunately for me, in my first cases, the family and friends knew well what was the matter, and no careful diagnosis on my part was necessary in that respect.

The favorable termination of these cases, under circumstances not auspicious, gave me frequent opportunities of observing the disease in its various stages and degrees of development. And although my experience has been more extensive and of longer duration than that of any other physician in our community, I claim no superiority over any of them in a knowledge of the pathology or treatment of this disease, and a prominence in this respect has been given me for many years back by the kind partiality of my professional brethren, as well as other citizens, to which I was not entitled. Yet the facts of experience are due to the profession as a matter of science, especially so to the young physician who may be called on to treat the disease, and also to the cause of suffering humanity.

I shall depart from the usual method, and leave the consideration of the primary cause of this disease to the last, and to a subsequent number.

The *symptoms* by which the disease may be certainly known, and readily distinguished from any other malady—require special attention.

If these shall be so well defined and so clearly stated, that no intelligent observer, especially a physician need ever be mistaken in his diagnosis, my *first* object will have been achieved.

In this, I shall take the liberty of quoting freely from the excellent treatise of Dr. Philips, of N. W. Ohio, not only because of the accuracy of his description and minuteness of his details, but that our physicians in Western North Carolina may recognize the identity of the disease he describes in that far off country, with the one with which we are here familiar.

One of the distinctive features of this disease is the absence of any premonitory symptoms. No chilliness, succeeded by sweating and slight fevers ; no pain in the head, back and limbs, no general lassitude for days preceding the attack. No critical stages mark its progress, nor any of the signs of convalescence usually met in other diseases. True this is a negative view of the case, but none the less worthy of attention.

"The first symptoms usually manifested are feelings of languor, with muscular weakness and an unusual sense of fatigue, nausea and vomiting. The patient soon seeks a recumbent posture and the disease is rapidly developed."

These symptoms invariably occur, if the disease amounts to any thing serious, but not always in the same order. Either may precede the others. The pulse is usually slower than normal, only when temporarily excited by efforts to vomit. The skin is invariably dry, and of a purplish hue—frequently corrugated, especially the hands, the feet and the face. The patient complains of heat and will not suffer his arms and legs to remain under cover, although the temperature is seldom above and usually below the natural standard. The head is drawn toward the chest, frequently on the railing of the bedstead, or hanging over it with one arm over the head. The countenance has an apathetic expression. The mind occasionally irritable, but generally in a state of hebetude expressive of utter indifference and abandon ; delirium is a rare symptom. The heart and large arteries appear to be laboring under heavy pressure, and the capillary circulation almost suspended.

"All the secretions and excretions are rapidly diminished." The bowels are constipated for want of peristaltic action. The patient is usually unable to walk or sit up, and if he should be, he is reluctant to make the effort. If these symptoms do not soon subside, they are followed by more complete prostration, frequent efforts to vomit, cold hands and feet, the eyes partially closed and glossy—or wide open and fixed on one object, stupor, coma and occasionally delirium, and "death steals over the unfortunate victim without a struggle."

"There are some cases which run an exceedingly mild course, being characterized only by a few day's debility, loss of appetite, and nausea, with a gradual restoration. Others, like the fulminant form of cerebro-spinal meningitis, completely overwhelm the subject, and death by coma ensues within one or two days from its commencement."

The quotations are all from Dr. Philips, of Ohio, and they bring the disease as forcibly to our minds as if they had been taken from cases of frequent occurrence among us.

"The breath is fetid and of a peculiar odor." The breath has a *peculiar* odor, an odor that belongs to nothing else, and where that odor is observed Milk Sickness exists as certainly as light emanates from the sun. I do not consider it fetid however, nor much offensive, but easily distinguished from any other odor.

[To be continued].

RESECTION OF THE FEMUR FOR UNUNITED FRACTURE WITH NECROSIS.

By W. W. Lane, A. M., M. D., President of the Board of Health. for New Hanover County, Wilmington, N. C.

John H. Boatwright, aged 32 years, belonging to a Texas cavalry regiment was wounded at the battle of Bentonsville by a Minie ball, which penetrated the inside of the leg just above the knee and came out on the opposite side; he was confined in the hospital at Raleigh and other points for a period of eleven months, under the treatment of the Federal surgeons.

Several abscesses formed from time to time subsequently, but there was no exfoliation of bone at any time.

On the 27th of March, 1877, while engaged in getting shingles he fell from a log to the ground, a distance of three feet, "stiff-legged" as he expressed it. The fall was attended with considerable pain and swelling, but he continued at his usual work; but on the 31st of March, after having walked nine miles, the bone suddenly gave away and he fell. A physician saw the case soon after, pronounced the femur fractured and set it, using an ordinary straight splint. After a lapse of seven or eight weeks, no union having taken place, and no improvement ensuing, the patient was sent to Wilmington, and put under my care for further treatment.

On examination, with the concurrence and advice of my friends, Drs. Anderson, King and Walker, it was thought advisable to make another effort to bring about bony union by a rëadjustment of the parts and the application of the most approved supports; the limb was accordingly well bandaged and placed in Byrd's posterior wire splint, and suspended after the manner of Smith's anterior apparatus.

It was thus allowed to remain over eight weeks, when the splints were removed and the fracture found still ununited, and with no apparent prospects of union. The spirits of the patient through all this long and tedious confinement were remarkably good, and his general health excellent.

It being evident now, that the bone was diseased, it was a question of amputation or resection, and after due consideration, it was decided to make an effort to save the limb by the operation of resection.

On the 26th of July, the patient having been given a glass of whiskey, and being well under the influence of chloroform, Esmarch's elastic bandage was applied from the toes to the upper third of the thigh, where the tourniquet, consisting of a piece of elastic tubing, was secured around the limb.

I then made an incision about six inches in length, between the borders of the rectus and vastus internus muscles, and on exposing the bone I found the upper portion denuded of its periosteum four inches or more. This part was taken off with the saw, as was also a half inch or more of the lower fragment found in a similar condition. The two ends of the bone were then placed in apposition and then held together by means of a silver wire carried through holes pierced in each end of the bone.

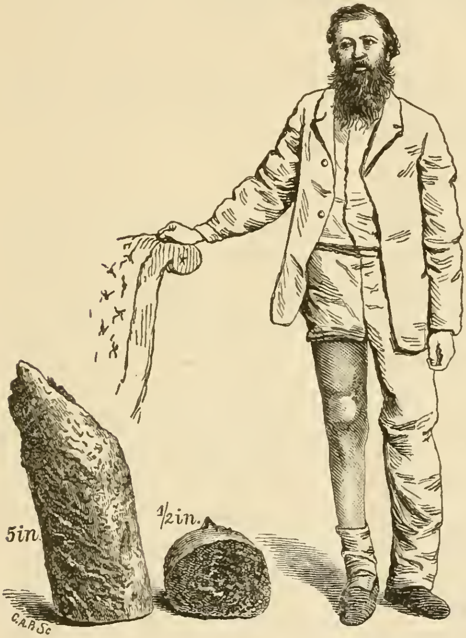
I was deprived, however, in some measure, of the aid expected to be derived by this means, by the parting of the wire in the efforts of the patient in recovering from the effects of the anesthetic.

The application of Esmarch's apparatus was very satisfactory in this case, and added much, in my opinion, to the successful issue of the operation, there being so little blood lost there was scarcely any use for the sponge.

The operation was necessarily a little slow, and never before having used this method in surgical operations, I was somewhat apprehensive of a subsequent healthy restoration of the circulation, but no untoward accident occurred to mar the successful tremination. I was much indebted to my friends, Drs. Anderson, King and Walker who were present, for their kindly assistance and counsel.

After the operation, the limb was placed in a hollow woooden splint with a screw-joint at the knee, and suspended as before with Smith's Anterior splint, the wound healed kindly and the sutures were removed in eight or ten days.

About the middle of September, all the appliances were removed and it was ascertained that the callous thrown out was becoming firm and the patient could move his leg about a little. About this time an abscess formed under the leg below the wound which was opened, but there was no further pus formation.



The accompanying figure is from a photograph of the patient after discharge from the hospital, showing a small degree of deformity by shortening, notwithstanding that 5½ inches of the femur were removed.

The patient was now allowed to move about on his crutches, and made to bear his weight from time to time on the limb which improved in strength and firmness each day, though the joint was partially anchylosed.

He was discharged and sent home on the 18th of October, with every prospect of having a useful limb restored to him.

I am just in receipt of a letter from Mr. Boatwright, dated December 25th, telling me that his general health is good, and that he is gradually regaining the use of his leg, and requesting me to get a cork bottom shoe for him.

SELECTED PAPERS.

NERVE-STRETCHING IN NEURALGIA, EPILEPSY AND TRAUMATIC TETANUS.

As a surgical procedure in certain diseases, nerve-stretching dates in 1872. Dr. Paul Vogt has recently issued a volume on the subject, being the first systematic contribution to this procedure in surgery. We will call the attention only to the most practical parts of the work in question, referring those specially interested to the complete treatise.

1. When we have to deal with a neuralgia of peripheral origin affecting a purely *sensory* nerve, and one which has resisted all previous treatment, and which we cannot influence by electrō-therapeutical means, a case in which no special local measures are indicated (removal of a scar, foreign body, or morbid growth,) *then neurotomy of the affected nerve, in combination with simultaneous stretching, both centripetally and centrifugally, is indicated.* By means of this combination, we dispose of the peripheral irritation, or, at least, we get an interruption of communication with the nervous centre, and also a diminution of the irritability in the course of the entire nerve-trunk since the action of nerve-stretching goes much further in this direction than simple division of a nerve ; and also from the circulatory changes there results an alteration in the nutrition—altered though it already is—of the nerve. Thus there is a combination of effects, which must almost necessarily produce a favorable influence on the disease, provided always that the *secondary changes in the nerve-centres* are not altogether beyond the possibilities of resolution. This operation, of course, is only admissible for sensory nerves.

2. Nerve stretching, alone will be indicated under analogous conditions for *mixed* nerves. If we are called to treat a neuralgic

affection, we should, of course, remove all local irritations by local measures (such as removing or detaching scars in the neighborhood of nerves), and at the same time by "stretching" seek to paralyze the result of the previous irritation. We might even, under certain circumstances, proceed to stretch the nerve-trunk without adopting the above mentioned preliminary measures, when all medicinal and electro-therapeutical measures had previously failed. In the latter case, we should seek to get at the nerve at the nearest possible point to its centre ; and by vigorous stretching endeavor to influence the local condition also.

3. Neurotomy alone is indicated in neuralgic affections of *a very localised nature*, where a *subcutaneous* division of the affected nerve-twig would suffice, and where the laying bare of the nerve trunk would scarcely be justifiable. In this group may be placed neuralgia of single sensory twigs in the case of extensive, and hence not easily extripated, scars, tumors and the like.

In Epilepsy.—The cases of epilepsy to which this plan of treatment is adapted, are those which we call *reflex epilepsy*, depending on some appreciable or fairly obvious injury of a peripheral nerve distribution. There is on record a large number of cases where the removal of scars, neurotomy, etc., have led to a perfect cure. The following would seem to be an exceedingly suitable case for the operation :—A man had a small tumor removed from the cheek. The wound only closed slowly. Shortly afterwards, after any great exertions or excitement, he began to experience a feeling of heat above the scar, and occasionally a twitching spasm in the muscles of the neck. These symptoms became aggravated after a time, and now he is the subject of well marked epileptic attacks. On examining the local conditions more thoroughly, a scar, about the size of a florin, is found in front of and beneath the angle of the right jaw. It is not painful or tender, and nothing abnormal is found in the surrounding parts. But there is one point, which is painful, from which twitchings seem to start. Topographically it corresponds exactly to the point of exit of the *nervus cutaneous colli superior et medius* of the cervical plexus. The author believes that he has found the source of the peripheral irritation, and has advised stretching of the nerve-trunk where the twig arises. The cases are to be recorded later on. In all cases, however, the indications must be exact and precise if we would be successful.

TRAUMATIC TETANUS.

Contrary to the advice given in the two previous diseases, we must, in this, proceed to operation at once, and not wait until all therapeutic and anæsthetic measures have been tried. If needs be, order these measures in addition to the nerve-stretching, but not in its stead. The surgical treatment may be both local and central. The cases, however, where any active local treatment can be of avail, are those in which no important changes in the central nervous system have shown themselves. The period during which the local treatment might be of service is exceedingly short. In some patients the central manifestations come on simultaneously with the disease, and here, of course, local treatment would not be of any avail whatever. As compared with all previous operative interference, nerve-stretching accomplishes much more, is a harmless operation if it even do not succeed, and does not require a solution of continuity in the nerve. In order to sum up, then, we may state that the prominent symptoms which call for this treatment are *exalted irritability*, and *disturbed function due to a disturbed blood circulation at the* peripheral termination of the nerve.

TECHNOLOGY OF THE OPERATION.—The actual accomplishment of such an operation appears very simple, and yet from a study of all the published details, it is clear that the final success depends very much on attention to small matters, which sometimes are apt to be forgotten. The operation may be divided in three stages :—1. Laying bare the nerve within its sheath. 2. Drawing forwards and stretching the nerve. 3. Reposition and application of dressings. The first act of the operation is a most important one. The second act of the operation may be performed either manually or instrumentally. For the drawing forward of the nerve, one naturally uses a blunted hook or an elevator, or for a small nerve, an ordinary aneurism needle. The actual stretching is best accomplished by passing the forefinger, appropriately curved, beneath the nerve, and using it in conjunction with the thumb. By this means we secure as much force as is necessary, provided, we place the limb in a suitable position. In the case of small nerves it would be impossible to pass the finger under them, and hence an *elastic* traction can be exercised without the risk of crushing, or otherwise injuring the nerve itself. The last part is the dressing. If the stretched nerve does not recede when the limb is placed back in its normal position, the operator must gently tack in the nerve into its bed. A small bit of drainage tube is to be placed into the bottom of the wound, which may then be closed by a few stitches. Lister's dressing and spray ought to be used in these cases, as rapid union and a small scar must be tried for."—*Medical Times and Gazette.*

OPIUM AND BROMIDE OF POTASSIUM IN HEART DISEASE.

Some time since some one called digitalis the quinine of the heart. But digitalis is a precious remedy which is sometimes abused. It has well-marked contra-indications. In heart diseases characterised by aortic insufficiency and obstruction, digitalis is not indicated; a series of experiments made by M. Gubler showing the power which opiates have in these cases. It is above all in mitral affections that opium is contra-indicated; it is useful, on the contrary, in affections of the aortic orifice.

Dr. Henry Huchard has sought to explain the therapeutic action of opium by attributing to it a *hyperæmiant* action on the brain. Without committing ourselves to this explanation, we shall content ourselves with making known the mode of administration.

Preference should be given to preparatioas of morphia, and especially to the subcutaneous injection of morphia; experience on this point having amply demonstrated, on the one hand, that large doses of this remedy only are successful, on the other hand, that the morphia injected into the cellular tissue is endowed with an action not only more rapid, but slightly differing from that which it possesses when introduced by the stomach.

At other times M. Gubler prescribed tincture of thebaia in five drop doses, three times a day.

In the *Revue Clinique de Bologne*, Dr. Giuseppe Angrisami has come to the following conclusions with regard to the administration of bromide of potassium: the bromide has no action on the muscular fibres of the heart as digitalis has, and the latter has no action on the arteries; the bromide is a remedy most fitting for correcting functional disturbances of the heart, as frequency, intermitting, arhythm, &c. Whatever be the state of the myocardium, it modifies advantageously and quickly angina pectoris and palpitations, when they are simple neuroses. In cases depending on profound anatomico-pathological lesions of the heart and its vessels, or on compression, the bromide succeeds in producing a more or less lasting improvement. From these facts we may conclude in favor of *opium* when there is aortic lesion; *bromide of potassium* when there is neurosis; *digitalis* in other cases.—*Paris Médical, August 2nd,* 1877.

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NORMAL OVARIOTOMY—BATTEY'S OPERATION—OOPHOROTOMY.

By J. Marion Sims, M. D.

The criticism in your issue (*Medical Times and Gazette,*) of October 27th, on "normal ovariotomy," so called, is both just and temperate. From a letter recently received from Dr. Battey, I learn that he has now performed this operation twelve times, with two deaths. I have performed it seven times with one death.

The success of the operation so far is not what we expected; but we hope for better results hereafter. As I am at an early day to bring this subject formally and fully before the profession, I shall here confine my remarks to the name by which we should recognize this operation.

Dr. Robert Battey, of Rome, in Georgia, U. S. A., based this operation on the theory of bringing about change of life by extirpating the ovaries, and thereby arresting the menstrual molimen. The name he gave his operation—normal ovariotomy—has been much and justly criticised in my own country. Two or three years ago, Dr. Battey asked me to give his operation a name, as the profession objected so much to the one he had chosen for it. He called it "normal ovariotomy," because he supposed he was extirpating a normal ovary—an ovary in a normal state, and of normal size.

But all the ovaries that Battey and myself have removed by his operation were found to be in abnormal or diseased condition. There was a radical organic change of structure in each and every one we have examined—a change easily seen by the eye without the aid of microscope. Hence the term " normal ovariotomy" is incorrect, inappropriate, and we should get rid of it.

This operation, like many others that have led to great results, has a little history of its own, which is by no means uninteresting.

Some years ago, Dr. Battey saw a young lady, aged twenty-one, die from the effects of an unrelieved menstrual molimen. Then he asked himself the question, " Would it not be possible to cure such cases by bringing about an artificial menopause by the extirpation of the ovaries ?" A few years after this he saw another young lady, aged thirty, in a like suffering condition, who, after prolonged and fruitless efforts on his part, was about to pass away, worn out with epileptiform convulsions, vicarious hæmorrhages, pelvic hæmotoceles, and pelvic inflammations and abscesses. The case was evidently absolutely hopeless under the ordinary methods of treatment. Death was imminent ; and Battey proposed, as a *dernier ressort*, the extirpation of the ovaries. The patient gladly accepted his proposition. Battey, living in a little country town, had no great masters in medicine to stand by him ; so he wrote to many of the leading obstetricians and gynæcologists of the country, stating his views, and asking their advice on his proposed operation. But he received no encouragement whatever from any of them. He explained all this to his long-suffering patient. But she was not at all discouraged, and begged Dr. Battey to perform his operation. He operated on her in August, 1872, removing both ovaries by abdominal incision. Fortunately his patient recovered. Her recovery was tedious. But the cure was perfect, and remains so to this day. Her epilepsy, hæmatoceles, her pelvic cellulitis, abscesses and vicarious hæmorrhages—all disappeared with the disappearance of the menstrual molimen ; and she is now a useful member of society. If we except the heroic operations of Ephraim McDowell, in the backwoods of Kentucky, in 1809, for the removal of ovarian tumours, I do not think the annals of medicine can produce an example of higher moral fortitude than that shown by Battey, when he, assuming all the responsibility, which was of the gravest character, dared to perform this hazardous operation, not only without the approval, but against the advice, of his brethren, and, that, too, in an obscure little country town, on a lady in the higher walks of life.

We may do heroic and untried operations in large hospitals in great cities, and, if the result is unfortunate, the responsibility is divided with our *confréres*, and in the whirl of life it is remembered by a few, but soon forgotten by the many. But in a little village of two or three thousand inhabitants, such rashness as it would be called, might damage a man's reputation seriously even if attended with success, and would surely ruin it if unsuccessful.

I would like to see this operation recognized by the profession as "Battey's operation." I think he is entitled to that honor. He was the first to grasp, in its widest range, the influence and effects upon the general system of what he calls an "unrelieved menstrual molimen," He was the first to suggest a method of cure. He was the first to carry out his own suggestion, and to perform an operation for the cure of a disease that had never been cured before. He performed the operation on his own responsibility, without the co-operative aid of a single member of the profession. He has demonstrated the correctness of the principles upon which it was based, and proved its success in practice. He has established a precedent that may now be followed with safety, and opened up a new field of observation that promises results as grand as those now achieved by ovariotomy. He has raised sorrowing women from a perfect slough of despond ; from indescribable suffering ; from epileptic convulsion ; from repeated pelvic inflammations, hæmatoceles and abscesses; from vicarious and alarming hæmorrhages ; from threatened insanity; and in some instances from impending and certain death ; and restored them to health, to friends, to usefullness, and therefore to happiness.

We have precedents enough for naming diseases and operations for those who have been the first to discover and describe the one, or to originate and perform the other. I may name Bright's disease, Addison's disease, Colles' fracture, the Hunterian operation, Syme's operation, Pirogoff's operation, Graefe's operation, etc. The moment they are named, we recognise each operation, and the manner of executing it in its manifest details. Let us honor Battey by calling this "Battey's operation."

It would be easy enough to give it a classical name to distinguish it from ovariotomy. We should continue to apply the term "ovariotomy" to the removal of ovarian tumours, properly speaking; and we might coin the term "öophorotomy" to designate it as Battey's operation, but for myself I prefer to designate it as Battey's operation. He has won the honor, and let him wear it. The difficulty already encountered in finding a name sufficiently distinctive and characteristic of this operation justifies us in calling it Battey's operation.

I appeal to my professional brethren in the Old World to join in honoring the profession in the New World by affixing the name of Battey to the operation, which he so ingeniously worked out, and has so heroicallly and successfully established.—*Paris, 2, Rue d'Albe.*

PROGNOSIS AND TREATMENT OF DIPHTHERIA.

Dr. Lewis Smith, Clinical Professor of Diseases of Children at Bellevue Medical College, observes (*American Journal of Medical Sciences*, October) that the endemic persistence of this disease in some localities, as New York, and its frequent epidemic outbreaks in country villages and towns, have aroused great attention as to its nature and treatment. No disease also, he adds, stands more in need of all the light which science and experience can throw upon it, not only on account of the divergence of views which prevails respecting it, but because of the frequency with which the prognosis is belied. This uncertainty of prognosis, he believes, depends much upon the fact that diphtheria terminates fatally in several distinct ways, so that while the patient may seem safe with respect to the more manifest and common conditions of danger, a fatal result may still occur from some unseen and unexpected cause.

Death may result from (1) diphtheritic blood-poisoning; probably also from (2) septic poisoning, produced by absorption from the under surface of decomposing pseudo-membrane—especially when this is extensive, deeply embedded, and attended by an offensive effluvium. Cervical cellulitis and adenitis, which may cause very considerable swelling of the neck, appear to be often, if not usually.

due to septic absorption from the lower surface, the inflammation extending from the absorbents to the glands and connective tissue. Considerable swelling of the neck, therefore, seldom occurs in diphtheria or scarlatina without manifest symptoms of toxæmia, and is to be regarded as a sign of its presence. (3) Obstructive laryngitis: (4) uræmia; (5) sudden failure of the heart's action, either from the anæmia and general feebleness, from granulo-fatty degeneration of the muscular fibres of the heart, which is liable to occur in all infectious diseases of a malignant type; or from ante-mortem heart-clots. (6) Suddenly developed passive congestion and œdema of the lungs, probably due to feebleness of the heart's action, or to paralysis of the respiratory muscles. Death may occur from this cause during what seems to be convalescence. The physician is less likely to err who bears in mind the possibility of these various terminations; and Dr. Smith believes that the condition of the urine is too infrequently and too superficially examined, seeing that it often contains a large quantity of albumen.

"Among the symptoms which render the prognosis unfavorable are repugnance to food, vomiting, pallor, with progressive weakness, and emaciation from the blood-poisoning; a large amount of albumen, with casts in the urine, showing uræmia, to which the vomiting is sometmies, but not always, attributable; a free discharge from the nostrils, or occlusion of them by inflammatory thickening and exudation, showing that a considerable portion of the Schneiderian membrane is involved; hæmorrhage from the mouth or nostrils; and obstructed respiration. One, at least, of these has been present in most of the fatal cases which have fallen under my observation."

It is remarkable, Dr. Smith observes, that concerning a disease which has been so long under wide-spread and able observation, such wide discrepancy of opinion as to treatment prevails. This has arisen in part by the different views taken of the nature of the disease, but still more is due to the unreliability of the statistics of treatment, owing to the very varying types the disease presents even in the same epidemic, so that while some cases resist all measures, others scarcely require treatment at all. He believes that the germ-theory of diphtheria has done immense harm by concentrating attention so much on local and general antiseptic treatment, which, as far as his experience goes, proves of little use; and he is of opinion that the fact of the treatise in Ziemssen's Cyclopædia, which propagates this doctrine, having been published before Sanné's more useful book, has led to great mischief. Experience has, however, brought on a reaction, and practitioners are beginning to learn that constitutional treatment is of as paramount importance in diphtheria as in scarlatina. As the result of his own large experience, he lays down the following propositions :—1. In ordinary cases the poisonous principle of diphtheria enters the blood through the lungs, and after incubation, varying from a few hours to seven or eight days, gives rise to the symptom of the disease. 2. Facts do not justify the belief that the system can be protected by antiseptic or preservative medicines, given internally. 3. There is no known antidote for diphtheria, in the sense in which quinia is an antidote for malarial disease. 4. Diphtheria, like erysipelas, has no fixed duration. It may cease in two or three days, or continue for as many weeks, the specific poison acting more intensely at the commencement than at a later period ; so that diphtheritic inflammation—as laryngitis, *e. g.*—is more severe and dangerous at an early period than when the disease has continued a few days. 5. The indication of treatment is to sustain the patient by most nutritious diet, tonics, and stimulants, employing other measures as adjuvants as the indications arise, the same rules of treatment being for the most part appropriate as are applicable in scarlatina. Local treatment should be unirritating and designed to prevent putrefactive changes and septic poisoning. Irritants which produce pain lasting more than a few minutes, or which increase the area or degree of redness, are hurtful, and increase the extent and thickness of the pseudo-membranes.

The most nutritious and easily digested food should be given, the preservation of the patient's inclination for food being of vital importance. Beef-tea or the expressed juice of meat, milk, with farinaceous substances, etc., should be given every two or three hours, or to the full extent without disturbing digestion. Failure of appetite and refusal of food are justly regarded as most unfavorable signs. In malignant diphtheria or scarlatina patients are allowed sometimes to slumber too long without nutriment. It is the slumber of toxæmia, and should be interrupted by feeding at stated times. *Stimuli*, as observed by Sanné, are indicated in proportion to the gravity of the case ; and while mild cases do well without alcohol, this is required in all cases of a severe type, and should be given in large and frequent doses, wherever pallor or loss of appetite, or of strength and flesh, indicates danger. Of *tonics*, none answer the purpose better than cinchona and quinia. Concerning the doses of the latter, the greatest difference of opinion prevails, according as its antipyretic or its tonic effects are sought to be obtained. But high febrile action calling for antipyretic doses of three, five, or more grains, are seldom observed after the first forty-eight hours, while at a subsequent period the tonic dose or two grains every two or four hours will be found sufficient. Great difference of practice also prevails with respect to iron, some using it exclusively in large doses, while others employ moderate doses as an adjuvant to vegetable tonics. The formula which Dr. Smith prefers, say for a child five years old, is the following :—℞. Quiniæ sulph. ʒ ss., elixir adjuvantis or elixir taraxaci co. ℥ ij. Give one teaspoonful every two or four hours, and one teaspoonful of the following hourly between—℞. Tinct. ferri chlor. ʒ ij., pot. chlor. ʒ ij., syrup ℥ iv. The tonic effect of the iron is not impaired by the chlorate of potass, which is added on account of its action on the inflamed surface. The citrate of iron and ammonia alone, or combined with carbonate of ammonia, may be given in two-grain doses, in syrup, instead of the above, when the inflammation of the fauces has considerably abated or is moderate. As the disease begins to abate, the intervals between the doses may be lengthened, but the tonic should not be entirely discontinued until the patient is far advanced in recovery, on account of the dangerous sequelæ which originate in an impoverished condition of the blood.

The object in *local treatment* should be to reduce the inflammation of the mucous surfaces, and destroy the diphtheritic poison and contagious properties in the pseudo-membrane, and to destroy the septic poison, and prevent its absorption should any form. Forcible removal of the pseudo-membrane, irritating applications, the use of a sponge or other rough instrument for making the applications, should be avoided as likely to do harm. These should be made with a large camel's hair pencil, or (better for most mixtures employed) with the atomiser. The hand atomiser, is very useful, but the constant spray of the steam atomiser is very effectual, and is preferable in some cases. Dr. Smith employs the following mixture :—1. Salicylic acid ℥ ss., glycerine ℥ ij., lime-water ℥ viij. 2. Carbolic acid gtt. xxxij., glycerine ℥ ij., lime-water ℥ vj. 3. Carbolic acid gtt. xxxij., chlorate of potash ʒ iij., glycerine ʒ iij., water ℥ v. Half a dozen or a dozen compressions of the bulb of the hand atomiser cover the surface of the throat more effectually with the liquid than can be done by several applications of the brush, and it is usually not dreaded by the patient. Diminution in size of the pseudo-membrane under the use of the spray is a favorable sign ; but if it do not diminish, its presence can do little harm if properly disinfected. In many cases the spray suffices for local treatment, but this mixture (carbolic acid gtt. viij., liq. ferri subsulph. ʒ ij.- ʒ iij., glycerine ℥ j.), applied by a large camel's hair pencil, is also very effectual, converting the pseudo-membrane into an inert mass, and putting a stop to all movements of the bacteria which swarm in it. It may be used two or three times a day between the spraying, or oftener without this. *Pseudo-membranous laryngitis*, the most formidable symptom of diphtheria, is best treated by the spray. Of twenty-five cases treated by Dr. Smith, seven recovered by inhalation of spray, and two by tracheotomy. When the *Schneiderian membrane* is especially affected, being more sensitive than the fauces, it requires a milder treatment. The best consists in injecting into the nostrils, by means of a small syringe, every third or fourth hour, one or two teaspoonfuls of a mixture formed of carbolic acid gtt. xxxiv., glycerine ℥ ij., and water ℥ vj., using it of the temperature of the body, the head being thrown back, and the eyes covered with a cloth.

We are indebted to the *Medical Times and Gazette* for this synopsis of Dr. Smith's article and copy it at length, to induce those who have not seen it to read the entire article, as it is worthy of attentive consideration.

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES.

PARIS, December 1st, 1877.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—There is but little activity in the medical world of Paris at the present moment. The minds of all Frenchmen are so absorbed in politics for the time being, as to preclude a special devotion to science in any of its branches. Professors lecture and students listen as if they were thinking of something more important than the subject matter before them, as if they were expecting momentarily, to hear the tocsin of a new revolution involving the fate of their country, or perhaps, of society itself. Bulletins from Versailles have more charms for the fraternity, than reports from Hotel Dieu ; while the debates in the Chambers are read with far greater avidity than the discussions in the Academy.

This excitement assumed rather a dangerous phase at the recent opening of the medical school. When Chauffard, Professor of Pathology and General Therapeutics, made his appearance before the class, he was received in the most boisterous and insulting manner possible. The students sang, shouted, hissed, indulged in ribald jests, and, despite his patient and persistent efforts to proceed, positively refused to give him a hearing. In America, such a demonstration would have led to the immediate resignation of the Professor ; but they manage things differently in France. On the succeeding day, all the students save those of the fourth class—candidates for the degree on the eve of examination—were excluded ; and as the number of these is limited and each individual realized that he was being "marked and noted," profound silence prevailed, and the Professor delivered his lecture without interruption. Chauffard, though a gentleman of unexceptional character, and a physician of great learning, belongs to the "Church Party," which in these radical times is considered damnable ; and, hence, this outrage upon him.

It is, however, possible that another element entered into this hostility to him. As the Chairman of the Advisory Committee of Public Instruction, he has recommended the authority action, *i. e.* the granting of the right to practice medicine in France, to at least, one foreign physician within the last two years, and as it seems to be the settled policy of not an inconsiderable number of the native fraternity to refuse this concession to all aliens, and, indeed, to drive those who are already domiciled here, out of the country, it may be that he was specially selected for an unfavorable demonstration, because of his liberality in this regard.

This leads me to a matter concerning which, I have long desired to say a word to the profession at home. Since my residence in France, I have received a great number of letters from physicians making enquiries in regard to the possibility of a residence abroad. American physicians, as a general rule, succeed very well in Europe, and there are several localities in which they are greatly needed at this present moment. There is, however, a very serious obstacle in the way of those who would avail themselves of these advantages. Foreigners are not permitted to practice medicine in Europe, without first having stood a critical examination, conducted in the language of the country in which they seek a residence, or having obtained a special decree from its government granting the requisite authorization.

Although in France the way is always open to success through the schools, the authorization is accorded very rarely and under the most exceptional circumstances. When, as the Surgeon-General of the Egyptian Army, I secured this authorization, the Secretary of the Faculty informed me that the *rule* for several years past had been to peremptorily reject *all* such applications, and I know that it has not been granted in a single instance since then, though repeatedly asked for by parties who brought every possible influence to bear in their favor. So strong is the feeling in regard to foreign physicians, that during the last session of the Chamber of Deputies, a bill was introduced demanding the expulsions of all aliens who had not graduated in due form in the Medical School of France and rendering an authorization impossible in the future. Had it not been for the earnest protest of the English government, and the prompt action of the French ministry, the measure would have passed unchallenged, and we should have been driven summarily out of France, notwithstanding our original compliance with the requirements of all existing laws. You will, therefore, perceive that it is worse than useless for an American physician to think of coming here with reference to the practice of medicine, unless he is prepared to matriculate at the Medical school and to go regularly through its courses.

From what I can learn, the same difficulties present themselves throughout Europe, though, perhaps, to a less serious extent in Italy than elsewhere. There the authorities are said to be rather more liberal in dealing with the diplomas of other countries, and it is *possible* to secure an authorization from them without having to submit to an examination in a foreign tongue. As there is but a single American physician residing in Rome and not one in Naples, cities to which immense crowds of our compatriots resort during the winter months, it may be worth the while of some of your readers to investigate this matter further. Some money, much professional experience, and a good address are the desidera upon which to base calculations as to the success of such a venture.

Since the Khedive's pecuniary embarrassments, he has been constrained to abandon the policy of employing foreigners in his service, and, as without government employment and pay no physician can hope to sustain himself in Egypt, it is folly to give a thought to that country.

A great number of our surgeons have applied to me for positions in the Turkish army, indeed, every mail from America brings me piles of letters with reference to this subject. It is true, that authority was given me some months since to select a certain number of medical men for the Ottoman army, but it is equally true, that, after learning what has been the experience of the only two gentlemen actually sent there, I determined to make no more appointments. As to what Turkey would do, if money was abundant, I know very well ; but unless a man is prepared to defray his own expenses to Constantinople and live after arriving there on the *promise* of one hundred dollars per month, he had better remain at home. At any rate, I shall not be instrumental in having any more of my compatriots try the experiment of serving in the Sultan's army.

Salicylic acid still constitutes the theme of discussion both in the Academy of Medicine and in the Clinical Society of Paris. Professor Sée seems to be the chief champion of this new remedy. According to his teachings it is *the* great *specific* in gout, rheumatism and rheumatic gout ; while it may be used with especial benefit in typhoid fever, erysipelas, malarial fever, small-pox and all affections in the clinical history of which *ferments* have a prominent place. He gives it alone or in combination with soda, *heroically*, in large and frequently repeated doses, and with marvellous results, so marvellous, in fact, that Ricord, who had seen some of his cases, was constrained to protest against his conclusions and to style him an enthusiast and a dreamer. Although it is evident that Sée speaks more for professional notoriety than in the interest of science, he has certainly demonstrated that salicylic acid has a far more extensive range of applicability than was previously supposed, and that it is an exceedingly potent and valuable remedy.

All who have employed salicylic acid must have noticed that it agrees with some patients far better than with others, that there is a certain percentage of individuals upon whom it immediately produces toxic effects. At a recent meeting of the Clinical Society of Paris, M. Bouchard in discussing a case of this kind, reported by a colleague, explained the anomaly by saying, that, under such circumstances, the agent was not eliminated by the kidneys, as is naturally the case, and that the intoxication which manifests itself indicates some disease or disturbance of those organs. He, therefore, insists upon the following considerations in actual practice, viz: not to prescribe salicylic acid and its preparation in cases where renal disease exists, since they consequently accumulate in the system, and insure the speedy development of toxic symptoms: to bear in mind that the non-elimination of salicylic acid and its preparations, *i. e.* the development of toxic symptoms, indicates an impermeability of the kidney, even when the ordinary signs of nephritic disease are absent. My own experience confirms these conclusions; for I have found that in albuminuria salicylic acid is not supported and really seems to intensify the disease.

M. Peter, who is one of the best observers in Paris, also called attention to the fact that the pulse always becomes notably slower when the full effects of this remedy has been induced, thereby showing that it exerts a direct influence either on the heart itself or on the cardiac filaments of the pneumogastric nerve. This fact readily accounts for the great prostration, and even sudden death, which has followed the too liberal administration of salicylic acid in certain instances; and supplies an invaluable hint in regard to its employment under all circumstances.

Quite a lively discussion has just occurred in the Academy of Medicine upon a proposition made by the Municipal Council of Paris, to appropriate funds for a thorough scientific investigation of the subject of artificial alimentation. M. Devilliers, representing the commission of Infantile Hygiene, combatted the proposed investigation upon the grounds that there was danger of inducing parents to neglect their offspring and that the public funds had better be expended in prizes for the encouragement of nursing mothers and those who properly cared for their children. Although Guérin and Colin took the opposite view and insisted that the interest of science and humanity alike demanded a thorough elucidation of this question, since circumstances made it one of practical import. The Academy refused the investigation by a large majority. Surely, in a country in which so many children have to rely upon artificial means for their chances of life, and in view of the frightful mortality which consequently ensues, the decision of these Academicians does seem a little overstrained and somewhat sentimental. If their philanthropy were made to assume a practical form and to illustrate itself in a persistent opposition to the "Sages-femmes," who do most of the obstetrical work, legitimate and illegitimate, in this country, and through whose instrumentality the business of rearing children artificially is principally carried on their sensitiveness to the alleged immoral tendency of the proposition submitted to their consideration, would be more respected and relied upon.

As this letter has already been made much longer than I had originally intended, I must bring it to a conclusion, and reserve such other matters of scientific interest as I had purposed to incorporate in it, for some future occasion.

I am, very truly yours, &c.,
EDWARD WARREN, M. D., C. M.

OUR NEW YORK LETTER.

New York, December 10th, 1877.

Your correspondent is prevented by physical disability from sending a full report of matters of interest in the metropolis. It is proposed, however, to devote much time in the future to the collection and elaboration of medical news, so that your readers may be promptly informed of events as they transpire.

I find that the *esprit de corps,* which is really solid in the profession here, and which ensures full meetings, and keeps up in the members a lively interest in the *res gestæ,* is nourished largely by symposial agencies, a method, which struggling societies elsewhere might imitate with good hopes of fruitful results. This applies, however, more particularly to the various associations of specialists, some of which are very exclusive, and not, certainly, to the great and ancient society of the country of New York, which lives and flourishes from the large number of eminent and able men who contribute much of their best work to its proceedings. Gray beards and bent forms do not think it useless to them or beneath their dignity to attend, and few meetings of this society are dull for want of members present, as many as 150 or 200 sometimes occupying the benches. It is true the "papers" read are not all of a great or even high merit, but most of them, from the ready access which the writers have, at the various libraries, to sources of statistical knowledge are richer in such details than can be expected from an essayist before the average provincial society.

The hospitals likewise are as full of varied clinical material which serves to supply apt illustration, and to furnish hints for the elaboration of lines of thought, that no "paper," if its author is at all industrious, should fail to set its hearers to thinking. But the discussions are not always equal to the opportunity here, as elsewhere, the writer is generally the *fullest* man for the evening, on the topic involved ; and it not infrequently happens that rapid utterances or lofty flights and ventures in theorizing, fail to receive the attack they so generously invite. Some of us may take comfort from this ! One notices too that the participants in the discussions are mainly the hospital men, the plodding practitioner from timidity or inexpertness, being usually conspicuous by his silence.

In the County Medical Society, which is presided over by Dr. J. C. Peters, two papers of marked ability have lately been presented, which must enrich the literature of their respective subjects ; one by Dr. Loring and one by Dr. Weir.

Dr. L. returns for the hundreth time to the inquire into the productive agencies of myopia, reaching conclusions quite orthodox in the light of the present state of our knowledge.

They show that heredity is not to be excluded as one of the causes, though it is not a predominant one, but that faulty methods of educating children must be held chiefly responsible for the increasing numbers of myopes. This is a very grave, though, doubtless just charge, in its relation to civilization, and demands the promptest and most earnest attention of sanitarians and scientists. The proximate causes are a stooping posture at study, producing congestion of the head, the strong tension entailed by convergence at close distances, and a general laxity of fibres which involving also the ocular tunics permits their distension posteriorly. These views are not new, but they have been practically disregarded in the lessons they should teach to those who call themselves teachers.

The best statistics, which, of course, further research will materially affect, show that the percentage of myopes in America (New York), among school children, under 21 years of age, is nearly 27, which probably is an under estimate, differing as it does, so widely from the Russian and German tables, which show respectively 42.8 and 62.1. This is clearly a matter for your own State Board of Health to take cognizance of.

I have said that Dr. Loring's paper was an able one, and so it must have been, since he is *primus inter pares* in his knowledge of the subject ; but it presented points and theses which certainly should have elicited contrariety of opinion ; the general ability and perfection of his argument, however, probably silenced contradiction, a singular fact considering the "giants" present.

Dr. Weir's paper, the other one alluded to, presented a complete summary of the claims of antiseptic surgery, entering fully into American and European statistics which demonstrate so conclusively its superiority in dealing with open wounds as to afford some excuse for his enthusiastic declaration that it should place the name of Lister above that of the discoverer of anæsthesia. As this latter individual is variously named Wells, Morton, Long and Simpson, each must share the honor of the discovery, and if the whole merit be represented by x, each is entitled $\frac{x}{4}$. The whole quantity of merit is Lister's device may be greater than $\frac{x}{4}$, but hardly greater than x. You will note that this method of estimating abstract and relative degrees is similar to that so highly urged by Addison, hence very classic. But joking aside, there seems to be little doubt that one of the highest places in the temple of fame will be awarded to Lister, and from which there is small danger of ousting him, since his paternity of antiseptic surgery is too well known to be disputed.

Dr. Weir's description of the system was as by one having thorough master of it, lucid in diction, logically clear, statistically full, and withal so modest as to confer much grace upon it. All the various materials, carbolized gauze, lint, cotton, tow, cat-gut, drainage tubes, salicylic and boric preparations, sharp spoon for renewing old sinuses, pure phenol (declared to be more efficacious than carbolic acid) were exhibited and passed around for close inspection. Various methods of dealing with fractures, spiculæ, sequestra, denuded bone, &c., &c., were clearly described, and very interesting cases cited in which granulating surfaces were scraped to secure blood clots which, under the antiseptic influence, rapidly organized into living tissue, covering bare bone, and supplying gaps in continuity.

The discussion developed in almost universal agreement, among members, and showed that the system was largely followed in our hospitals. Professor Stephen Smith spoke of it as introducing a new era in surgery, and of its promise to give us additional power to save life and to preserve limbs and parts which accident and disease formerly required to be sacrificed. Now, he thinks, joints may be freely explored, compound fracture repaired without amputation, cavities of the trunk laid open to examine a wounded viscus, or for the relief of ileus or hernia.

The system is largely employed in ovariotomy. Dr. Langston thought it all very well, but pointed out that the best statistics of antiseptic surgery could be fairly matched by those of many surgeons under older methods ; said that the great care and preciseness of detail which Lister and his followers strictly enjoin practically prevents its general adoption. He cited Nussbaum, one of its greatest advocates as taking a full year of doubt and failure to learn how Lister "did this thing," showed that Lister himself was continually making changes in the method, and said that these facts suggested some insuperable difficulty, in the perfected application which for the present would relegate it to the trained staffs of the best appointed hospitals. He did not condemn the system, however, and it will, I think, in spite of the difficulties which now surround it, win its way to recognition as one of the most estimable resources of surgery—a new creation. Nothing will contribute more largely thereto than Dr. Weir's masterly paper, which should find its way into the hands of every one.

At the last meeting of the Ophthalmological Society nothing of general interest was developed.

There was a universal, and by some, very severe, condemnation of the nasal douche, which was shown beyond doubt to be dangerous, even in skillful hands, not only to audition, but to life. Inquiry, however, failed to develop any knowledge among the members of an efficient substitute for the douche for cleansing the pharyngeal and nasal spaces. Dr. Pomeroy uses solutions of nitrate of silver applied with a brush, trusting to arouse a sneezing process to remove accumulations. Dr. Roosa and others use Davidson's syringe; some use simply snuffing up of water, medicated or not; but all these processes were shown to possess in no inconsiderable degree the dangers of the douche. The upshot of all is, that all the members use the douche or its equivalent, and trust to luck in not killing their man.

Other interesting matter must be deferred to my next.

Your North Carolina readers will be pleased to hear of the general success and high professional standing of some of their old friends, particularly Drs. Hall, Goelet and Skinner, of this city, and Dr. Fessenden, of Brooklyn. Others, are perhaps, not doing so well. Why? time will develop; but *non possumus omnes.*

D.

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Chemistry of Common Life.—A distinguished Professor of Chemistry suggests that the nomenclature of that science might be drawn upon for a variety of pretty additions to female names. Having himself a family of five girls, he has named them respectively, *Glycerine, Pepsine, Ethyl, Methyl* and *Morphia.*

PUNCH.

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Cost of Antiseptic Dressing.—Dr. Gillespie remarked before the Edinburgh Medico-Chirurgical Society, that he was glad to see an effort was being made to cheapen antiseptic dressings, as it cost about £1,000 a year in the Royal Infirmary.

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Price of a Cadaver.—The market price of a dead body is about $20 in London.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

We revive the North Carolina Medical Journal without an apology for adding to the number of professional periodicals, although in the opinion of some persons, the number is already too large. Whether or not the profession are willing to agree with us that such a journal is needed, as we progress with our work we are satisfied that they will, and that they will welcome the visits of our Journal with increased interest as they know us better.

The support already given and promised by our friends in North Carolina and elsewhere, cannot fail to realize our expectations of success, and to them, we return our thanks. At the same time we invite the aid of our friends with whom we have not conferred, in our new work. When our medical friends take up a number of our Journal and are dissatisfied with its contents, let them betake themselves to their pens and contribute to our pages, and like true and skillful physicians apply the remedy they think is needed.

A new generation of medical men has sprung up since the last number of the Medical Journal of North Carolina was issued in 1862. The war with all its disastrous effects, was a school of training from which very many of the younger members of the medical profession came out, with enlarged views, increased knowledge and infinitely better education, both as physicians and surgeons ; this is known to be true of the entire Southern profession. It is impossible to maintain this advanced position though without sustained effort, and nothing can be of more service to this end than periodical professional literature. We therefore, offer the North Carolina Medical Journal to the medical profession as an earnest of our faith in the ability of Southern doctors.

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THE WOMAN'S HOSPITAL CONTROVERSY.

We are sorry that Dr. Sims and the editor of the *Clinical Record* thought it due to the public, to present such an extended account of this controversy. It is hard to see what good can come of it, and there is abundant opportunity for much harm. The friends of the gentlemen parties to the controversy, have long ago made up their minds about the case, and we do not believe that any American physician can cease to regret the altered relations they bear to each other now.

The professional reputation of all the gentlemen involved in this unfortunate controversy, is too much revered by the mass of American physicians for it to be affected by any number of controversial pamphlets; and we hope we will be allowed now to forget all but the brilliant scientific record they have given to this generation.

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WEIGHT AND PULLEY EXTENSION.

In narrating the history of the progress of the treatment of fracture of the femur, (*New York Medical Record*, December 1st,) Dr. Frank H. Hamilton in his lecture on that subject has left out one or two items which are necessary to complete the history of this important matter. Professor Hamilton properly speaks of the weight-and-pulley extension, now so commonly associated with the name of Dr. Buck, as an apparatus which has so long been employed in this country, and so much modified that it may, with propriety be called American.

By reference to the *American Journal of Medical Sciences*,* it will be seen that Dr. William C. Daniell, of Savannah, Georgia, treated a case of fracture of the femur in 1819, by means of a weight-and-pulley extension, and so well was he satisfied with his results, that he again employed the same treatment in another fracture of the femur in 1824, giving a diagram of the apparatus employed. Adhesive plaster was not used, but the mechanical principle involved, was, in many respects the same. As far as we can discover, this was the beginning of extension by weights. It was not until the year 1851, that Dr. Josiah Crosby, described his method, in an article "on the application of extension in fractures by means of adhesive plaster," † a method as far in advance of Dr.

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*Vol. 4. p. 330. †N. Y. Med. Jour., Vol. 16. p. 138, from N. H. Jour. Med.

Daniell, as that of Dr. Buck or Dr. Sayre is in advance of that of Dr. Crosby.

Reference to Dr. Daniell's diagram, before mentioned, will soon settle the question of priority of invention and it is due to his memory, to recall the matter to the attention of those who have overlooked it. The elegance and usefulness of the present apparatus, so greatly improved since its inventor gave it to the world, does great credit to all the gentlemen who have lent their aid in perfecting it.

In the Southern States, the home of the invention, the weight-and-pulley extension is much less used than the suspensory anterior splint devised by Professor Nathan R. Smith. The latter apparatus is capable of so many modifications, is so easily prepared from material within easy reach of physicians, even in remote districts, and yielded such excellent results during the late war and since, that it is still the favorite.

Dr. Henry A. Martin calls attention to the fact, that more than one generation of practitioners in Pennsylvania, employed plaster straps for extension in fractures of the leg and thigh, and that Dr. Benjamin Gooch, of England, also employed it. It is true, notwithstanding this, that Dr. Daniell, of Savannah, did not hide his light, but put it before the world in the foremost medical journal of the land, and illustrated his appliance with a plate.

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EDENBOROUGH MEDICAL COLLEGE.

Few physicians are aware that a Medical College has been in operation in North Carolina since 1868, in the backwoods of Robeson County, the nearest town, Lumberton, being about twenty miles distant. From this institution, presided over by Dr. Hector McLean, he being the only instructor in all the branches of medicine, very many "graduates" have been turned loose, chiefly upon the communities on the borders of the Carolinas.

A report from a committee appointed by the North Carolina Medical Society, made at its last meeting, shows that the charter of this concern was granted by the "Legislature of North Carolina, and while its charter was full and liberal, and upon its face anticipated a first-class institution," its provisions were never carried out.

The "diplomas" were signed by Dr. McLean in all the different branches of medical sciences. The demonstrator of anatomy was the son of Dr. McLean, "quite a youth, who, himself has never seen the inside of any other college, and as far as we are able to learn has never dissected a human subject."

The committee "are unequivocally of the opinion that this state of things is a blight upon our profession, a burlesque upon science, and a curse to humanity," and recommend that the State Medical Society request the Legislature to rescind its charter.

The recent death of the principal, Dr. McLean, we hope, has put an end to this legalized outrage, but we trust that the committee will not be satisfied until they have made sure that this charter is rescinded.

We suppose, one reason why this matter did not receive earlier attention was, that it was hoped the granting of a charter was about all that would come of the enterprise, and that it would soon come to nothing, as did many others of the wild schemes then incorporated. But while the profession has allowed the wrong to go by unchallenged, chiefly because of their powerlessness to avert it, much harm has quietly been done, and we may be thankful that the end is close at hand.

It is very clear that the diplomas held by these graduates of the "Edenborough Medical College" are shams, and it speaks little for the intelligence of a community, that would countenance such pretenders. The remedy is within the reach of all who want it, viz: to demand that any such "doctor" shall show the license from the State Board of Medical Examiners, failing in this, he is debarred from collecting his fees.

Having carelessly authorized a scheme the outgrowth of which has worked so much evil for the unsuspecting people,—the constituents of the law makers, let them set about with earnestness and diligence to correct this error when the Legislature meets again.

RELATIVE VALUE OF QUININE, CINCHONIDIA AND OTHER CINCHONA ALKALOIDS.

In some sections of North Carolina, during the past summer and fall, malarial fever has been of a serious grade, and the high price of quinine has put this drug out of the question with the great majority of patients. The other cinchona alkaloids have been used extensively, and perhaps it is by the test of this past season's experience that their relative value will be determined. If it turns out that cinchonidia or cincho-quinine has answered as a substitute for the more expensive alkaloid, then its high price has served a valuable purpose in compelling their use. In hardly any other circumstances would physicians have abandoned their reliance in their long-trusted quinine for any other.

We do not wish to anticipate the result of the enquiries sent out by the State Board of Health, but we fully expect a report favorable, to at least one of the substitutes.

Of cinchonidia especially we have had abundant personal experience, during the past summer and fall, and have learned to trust in its remedial power in the severe pernicious fevers of our climate with a confidence, little short of that we place in quinine almost grain for grain; and when the price of the two drugs is considered. in the present impoverished condition of many communities, we have hardly any choice left.

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REVIEWS.

Index of Diseases and their Treatment; By Thomas Hawkes Tanner, M. D., F. L. S.; second edition revised by W. H. Broadbent, M. D. Lindsay & Blakiston, 25 S. 6th street. Philadelphia. Price $3 00.

From the first clinical hand-book published by Dr. Tanner, in 1860, to this work, he has succeeded in winning the popular favor of the profession. It is always a strong temptation for the busy practitioner who is seeking to refresh his memory upon the perplexing topic of his day's work, to go to a source wherever he can get the desired hints with the least trouble. Whether or not such a superficial way is productive of favorable results, it is the way very many physicians have of informing themselves, and to them we know of no work so well up to the times as the one before us. There is a complete tabular synopsis in the beginning of the book, and the diseases are comprehensively arranged in alphabetical order.

There is a very full appendix of classified formulæ, covering upwards of 150 pages, also arranged alphabetically.

A short extract taken at random, will give an idea of the conciseness of the definitions: "SCARLET FEVER.—This disease known also as scarlatina, from the Italian *scarlatto*, scarlet—is an infectious fever, characterized by scarlet efflorescence of skin, and mucous membrane of fauces and tonsils; the efflorescence commencing about second day of fever, and declining about the fifth. Often accompanied by inflammation of throat and sometimes of submaxillary glands. Like measles, essentially a disease of childhood; but more to be dreaded. As a rule, scarlet fever occurs but once; in the event of a second attack there is often no rash, little or no throat affection, and the disorder runs a favorable course."

The Index covers the ground of surgical, as well as medical practice, and may be said to be a most valuable assistant to the student just starting out upon a special investigation, and in the author's word, it may truly be said that it is "a work which the practitioner will esteem the more highly, the more attentively he studies its pages."

FIRST AND SECOND CONTRIBUTION TO THE LIFE HISTORY OF CONTAGIUM; By Peter Murray Braidwood, M. D., F. R. M. S., and Francis Vacher, London, 1876-'77, 4 to pp. 21–26.—British Mediical Journal.

The works before us on contagium are of especial interest. The medical mind is industriously seeking to trace the history of "disease germs," and to isolate, if possible, the morbific elements whatever they are, in one or more of the fluids obtained from vesicles of the well-known diseases, small-pox and cow-pox. In a mémoir presented l'Académie des Sciences, in 1868, (Comptes Rendus, p. 289,) M. Chauveau stated that the fundamental fact contained in this investigation of the nature of vaccine virus, was to make a basis for a general theory of contagion." Since that time

Drs. Sanderson, Beale and others have made observations upon the living elements of disease, while in Germany the late work of Dr. Klein on the Typhoid-Fever poison is already well known.

The three questions representing the problems of systematic study as presented in their work, are :

1st. What is contagium ?

2d. In what manner is contagium generated or communicated ?

3d. What are the conditions on which the life or activity of the contagium depends ?

The work which our authors accomplished is no easy one and may be briefly stated :

1. A repetition of the experiments of Chauveau and Sanderson to test the soundness of its evidence, on which was based the proposition that it is the particles and not the soluble constituents of vaccine virus upon which its activity depend.
2. Experimental vaccination of a heifer from which small sections of vaccinated skin were removed at successive periods of twenty-four hours, showing the graphic history of the local changes.
3. An experimental vaccination of many infants and heifers with lymph, mixed with or exposed to the action of certain so-called germicides.
4. An experimental vaccination of many children with lymph preserved for various lengths of time by various methods.
5. Many experimental vaccinations of human subjects with animal lymph, and of heifers with retro-vaccine.
6. Experiments with vaccine lymph and water exposed.
7. Experiments with vaccine lymph subject to increased temperature.
8. Experiments with vaccine lymph exposed to intense cold.
9. More experiments with vaccine mixed with so-called germicides.
10. Skin-sections removed from vaccinated heifers in various stages of progress.
11. A series of skin-sections from five vaccinated human subjects.
12. Skin-sections showing the progress of variola in the human subject.
13. Skin sections from healthy and scarlatinal pigs, and from human scarlatinal subjects.

The work is illustrated with many cuts, designed to give some idea of the microscopical appearances of the skin sections, presented by the authors to the British Medical Asssociation. The expense of producing these illustrations in some higher style of art, would have been greater than that of the cuts furnished, but would have been more serviceable to the student. This is no fault of the authors, but was due to the economy practised by the Association publishing them. Drs. Braidwood and Vacher, have succeeded in presenting their work in an attractive way as could be, giving theory but a subordinate place, and making prominent the facts which their observations elicited. We shall look with increased interest for the third and last contribution by them. How far the isolation of disease-bearing germs, (which now seems all but established,) may go to lead us on to the practical lessons of the prevention of disease, we are yet to learn ; but that one observer (Klein) believes that the contagium of enteric fever is cognizable to the eye, and another (Lebert) believes that an organism is found in relapsing-fever bearing a causative relation to disease, is well known, and it would be exceedingly disappointing if the outcome of all the work leading up to these convictions should not have a practical value at no distant day.

POISONOUS MUSHROOMS; By ISAAC OTT, M. D., Demonstrator of Physiology, University of Pennsylvania.

The comparative variety of mushroom poisoning in this country, makes it none the less desirable that the antidotes should be well known, and Dr. Ott has done a good service in issuing his pamphlet. It is the most complete statement of the symptoms and their treatment we have ever seen from any medical authority. He concludes, by saying: "That in mushroom poisoning, with the usual employment of emetics, stomach pump, purgatives and gallic acid, atropia should be given subcutaneously, say 1-100 of a grain, the dose to be repeated according to indications."

To one skilled in mycophagy, however, the earlier symptoms of burning in the throat are often well-marked and well-understood, and are promptly antidoted by whiskey and sweet-oil.

We cannot agree with Dr. Ott "that none (of the mushrooms) are very nutritious, and all are hard to digest."

The late Rev. Dr. Curtis, the most experienced American mycophagist, in an article on Edible Fungi, (*Gardner's Chronicle*, London, October 9th, 1869,) says that " there are families in America, that for generations have freely and annually eaten mushrooms, preserving a habit brought from Europe by their ancestors. In no case, have I heard of accident among them. I have known of no instance of mushroom-poisoning in this country, except where the victims rashly ventured upon the experiment without knowing one species from another." And again he says, "of (their value as food) I had become so well convinced that, during the late war, I sometimes averred, and I doubt if there was much, if any, exaggeration in the assertion, that in some parts of the country I could maintain a regiment of soldiers five months in the year upon mushrooms alone." * * * * * "Hill, plain and valley, woods, fields and pastures swarm with a profusion of good nutritious fungi, which are allowed to decay where they spring up, because people do not know how, or are afraid to use them. By those of us who know their use, their value was appreciated as never before during our late war, when other food, especially meat, was scarce and dear. Then such persons as I have heard express a preference for mushrooms over meat had generally no need to lack grateful food, as it was easily had for the gathering, and within easy distance of their homes, if living in the country." At one meal the Doctor had thirteen different kinds cooked together in a grand *pot-pourri,* owing to the scarcity of his favorite kind.

Dr. Ott's pamphlet contains some suggestions about the antagonistic effects of *muscarin* (the poisonous principle of the mushroom) and atropine. The former acts in some respects like calabar bean. It may be, that we will find in muscarin, by this new study of the subject, a valuable therapeutic agent.

The suspension of the *British and Foreign Medico-chirurgical Review and Quarterly Journal* is announced in the October number. The publishers have for sometime noticed a falling off in the sales, and this has continued in spite of their efforts to maintain the proverbial high standard, and to infuse new life into the publication. The reason given for its discontinuance is, that the same impatient spirit which looks for rapidly recurring issues from the secular press has spread itself among medical readers, and the acknowledgment is sadly made, that the thoughtful old quarterlies must yield to the more spirited monthlies and weeklies. It dies gracefully, after an honorable existence of thirty-eight years, during which time it has maintained a leading position in directing medical opinion and progress. The very last number is fresh and quite up to to the highest grade of modern thought, embodying as much vigor as if it were an aspirant for a long life. From its ashes must come a Phœnix.

MEDICAL ANNOTATIONS.

CHRYSOPHANIC ACID OINTMENT IN PSORIASIS.

The accounts we get from London of the valuable results of the new chrysophanic acid in obstinate psoriasis are so remarkable, as to assure us that it will take its place permanently in our Pharmacopœia. About a year ago it was first brought to the attention of the profession by Dr. Balmanno Squire, of London, and since that time it has steadily grown in favor.

One case of long standing psoriasis—twenty-seven years—was treated by Dr. Squire in the following manner: An ointment was made, two drachms of chrysophanic acid to an ounce of lard, the former being fully digested in the latter at a temperature of 360° Fahr. (oil bath) to insure the requisite incorporation of the ingredients.

The treatment was begun on September 24th, and by October 1st the greater part of the eruption had disappeared. Certain portions of the diseased surface were obstinate as is always the case; but on the 26th of October, the patient was in a condition of complete freedom from his disease.

As a necessary part of the treatment, it remains to be said, that phosphorous was administered in a solution with oil, in capsules, known as *perles*, the dose being 1-10th grain of phosphorous a day. Dr. Squire does not mention it, but it is well known to some American dermatalogists that the phosphorous up to a certain point does well, and should be watched with extreme care, that this favorable limit be not overstepped.

Preparatory to using the chrysophanic acid ointment, the patient is taught to soften the scales with soap and water, and to scrape the skin with a dull edged knife. Care must be taken that the ointment should not get into the eyes, and the patient is directed to wear a night-cap, and wash the fingers with benzol after using it. The hair, skin, nails and other parts are dyed so that it is only necessary to forewarn the patient. But any one who has suffered years or even months with proriasis, would willingly sacrifice clothing, and suffer the temporary staining of the hair, even to rival the dilemna of Tittlebat Titmouse, to have a cure effected. Dr. Squibb, in the *Proceedings of King's County Medical Society*, for December, reminded us that chrysophanic acid was found in rhubarb in considerable quantity, and that rhubarb ointment might make an economical substitute; but if the proportion mentioned by Dr. Squire is essential, the substitute would hardly be a saving. Some erythematous inflammation was produced by the ointment in Dr. Squire's case he tells us, and probably a weaker application would be better tolerated.—*Medical Times and Gazete*, Dec. 8th, 1877.

FUCUS VESICULOSUS.

Kelp; Bladderwrack. Seacoast of North Carolina, (Curtis' Catalogue Indig. Plants of North Carolina). The dietetics and therapeutics relating to obesity have gained considerable prominence in medical literature of late; and as the attention of persons suffering from obesity will be attracted by any remedy claiming a curative effect, it is well to mention *Fucus vesiculosus*, (Varec; Kelp; Bladderwrack) an old remedy brought anew to the attention of the profession.

In the 2d vol. of Pareira's Mat. Med. will be found a good woodcut illustration of this plant; and also in the November number of *New Remedies*, are given illustrations of three species of *Fucus* to enable one to determine the true medicinal plant.

The constituents of this plant are *cellulose, mucilaje, mannite, odorous oil*, coloring and bitter extractive, and various salts.

The amount of *iodides* is small, varying in the different localities where it is found, not more than 25 per cent. at any time; while the chloride of sodium, sulphuric acid, potash, soda and lime represent its solid constituents.

In 1862, Duchesne Dubois gave this drug for *Psoriasis* to an obese patient, and failing in the cure of the disease to which it was directed, he found that his patient lost flesh at the rate of 3½ lb. in 34 days, the dose being 4½ grains of the extract.*

The peculiar charm in the bladder-wrack as a remedy, is that no severity of diet is necessary. It is not until the remedy has been used two or three weeks that the peculiar effects show themselves, the favorable symptoms being the appearance of a black pellicle on the surface of the voided urine.

We will soon know whether this old remedy was worth drawing out from its old hiding place.

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*An excellent fluid extract was shown us by Messrs. Green & Flanner, Druggists Market street, Wilmington, N. C.

INTRA-UTERINE INJECTIONS OF ERGOT.

Post-partum hemorrhage is quite common in Dr. Ashe's practice. (Wadesborough, N. C.) and is owing, he thinks to a general cachexia or habit of defibrinated blood, due to the wide-spread malarial influence, and also to excessive snuff-dipping among females.

His plan is to remove coagula; then with a Davidson's syringe wash out all the blood with cold water, and quickly inject into the cavity of the womb ℥ss. Squibb's fluid extract of ergot, with water ℥jv. The effect has invariably been to bring on promptly strong, permanent tonic contraction of the muscular fibre.

Dr. Ashe knows that the contractions are caused by the ergot, and not the removing of the coagula and use of cold water, because these means alone have not accomplished the same results.—*Virginia Medical Monthly*, December, 1877.

GELSEMIA AS A MYDRIATIC.

Recent observations have placed the *Gelsemium Sempervirens* and its alkaloid *Gelsemia*, in a prominent place in the list of new remedies.

It has long been known in the Southern States as a remedy, and the general introduction of it is due to the thorough test which has been made of it by Dr. E. A. Anderson, of Wilmington.

We learn from an article in the London *Lancet*, by Mr. John Tweedy, that a solution of four grains of the hydrochlorate of gelsemia to the ounce of water was employed as a mydriatic with the following effects: Gelsemia dilates the pupil within three hours if a solution of eight grains to the ounce is used, the power of accommodation returning after ten or fifteen hours; with atropia, the effects continue during several days, at least eight or twelve. The confusion of vision is nothing like as great after the use of gelsemia as it is from atropia. It is greatly to be preferred to atropine in those cases where the power of accommodation is not great, where it is necessary to overcome accommodation for a short time only for the purpose of estimating the degree of ametropia, because its effects are more transient.

OBSTETRIC PHANTOMS.

Dr. Fancourt Barnes exhibited to the Obstetrical Society, of London, a phantom made by Mathieu *fils*, which had lately come over from Paris. It was devised by Drs. Budin and Pinard, chiefly with a view of familiarizing students with the diagnosis of the fœtal position by palpation through the abdominal walls. For this purpose a caoutchouc bag was provided, to represent the bag of membranes. In this a dead fœtus was placed, water was poured in to the necessary amount, and the bag was tied up. The whole was then placed in the phantom, an apron of caoutchouc representing the anterior wall of the uterus was buttoned over it, and the part representing the abdominal walls was placed *in situ*. By this means a very fair imitation of the natural phenomena was provided. Another modification of this new form of phantom, was that the promontory of the sacrum could be moved forward by means of a screw, so as to represent different degrees of the pelvic contraction. Cephalotripsy, craniotomy, and embryotomy might then be performed with a much nearer approach to actual conditions than in common phantoms. Finally, one great advantage in having all the soft parts made of caoutchouc, was that they could be easily replaced when worn out.—*London Examiner*, November 15th.

HYDROCHLORIC ACID AND NOT PEPSINE DIMINISHED IN FEVER.

An interesting illustration has just been noticed of an experimental investigation reported by Dr. Von der Velden (Berl. Klin. Woch. 1877, No. 22). The patient under investigation had typhoid fever, which ran a normal course. The contents of the stomach were examined daily, and revealed the absence of *free hydrochloric acid*, although the fluid gave a feeble acid reaction probably from the presence of lactic or acetic acid.

The case confirms the observations of Pavy, Hoppe-Seyler and others, that it is the acid, and not the pepsine of the gastric juice which is diminished in fever. It seems to confirm clearly the value which hydrochloric acid has long held in the treatment of typhoid fever, a practice which was recommended with great confidence by Chambers and Huss.

THE CHOICE OF THE LEG WHICH SHOULD BE SEIZED IN VERSION FOR PRESENTATION OF THE UPPER EXTREMITIES.

Dr. Galabin in this paper said that the case referred to is that in which the liquor amnii had escaped, and bipolar version is no longer possible. The doctrine commonly taught in England is, that in such cases it is necessary or desirable to seize the upper knee or that opposite the presenting shoulder. This is recommended on the ground that in this way the child is rotated on its longitudinal as well as on its transverse axis, and by that means the presenting shoulder more effectually carried away from the os uteri. By taking the lower leg the fœtus is rotated on its bilateral plane. By taking the upper leg it is intended to rotate it in the antero-posterior plane, which passes through the presenting shoulder and the opposite hip—a movement which is equivalent to rotation on its transverse and longitudinal axis at the same moment. In dorso-posterior positions, however, this rotation often fails, as is proved by the back being found still directed backwards immediately after version. In such case the same kind of rotation is produced by taking the lower leg, but at a less mechanical advantage. By two figures drawn to the same scale, representing sections of the fœtus, first in the bilateral plane, secondly in the antero-posterior plane through the presenting shoulder and opposite hip, it is shown that traction on the lower leg acts at a greater mechanical advantage in effecting rotation on an antero-posterior axis than traction on the upper leg in effecting the combined rotation on a transverse and longitudinal axis. A more important advantage in seizing the lower leg is, that if a noose be placed on the prolapsed arm the operator will have in the after-extraction complete command of the anterior arm, which is always the one which gives trouble in liberation, and often thereby causes the death of the fœtus. Moreover, if the lower leg be seized, the more usual dorso-anterior position is not converted by the version into a dorso-posterior—a point of very minor importance, but one which sometimes be worthy of consideration. The author has practised this method in eight consecutive cases without being obliged in any one of them to bring down afterwards the opposite leg. In some cases, however, if the fœtus be dead and flaccid, the shoulder fails to rise if version be performed in this way. In these instances the upper leg may be brought down afterwards with as much advantage as if it had been seized in the first instance. In such difficult cases of version there is an actual benefit in bringing down both legs, for not only is a means thereby afforded for more powerful traction, but more room is furnished within the uterus. Moreover, if the breech be first drawn down as low as to a transverse position by traction upon the lower leg, traction upon the upper leg will afterwards act at greater mechanical advantage in rotating the fœtus on its longitudinal axis, and so aiding the elevation of the shoulder. The conclusion drawn by the author is that in the majority of cases it is preferable to seize in the first instance the nearer and lower knee, or that on the same side as the presenting shoulder.

Dr. Matthews Duncan said he had for many years taught the preference of the leg homonymous with the presenting arm, according to the views which Dr. Galabin had now so elaborately and successfully advocated.

Dr. Holman said he had for many years followed the practice of bringing down the nearer or more dependent knee, and had always succeeded in effecting version.—*Extract from Obstetrical Society of London.*

ADMINISTRATION OF REMEDIES BY DROPS.

The prevalent custom of directing certain remedies to be given in drops involves a source of error which should receive attention. The popular method of dropping from the neck of the bottle is so manifestly faulty that it requires no comment. Even with drop-tubes the volume of the drop must evidently vary with the diameter of the tube. Laudanum when dropped in the ordinary way from the neck of a small bottle will give, say, twenty drops; while the same quantity dropped from the measure-tube will give seventy-five drops. The element which exercises the greatest influence in causing a variation is the quantity of alcohol contained in the fluid; the greater the proportion of alcohol in a given quantity, the greater will be the number of drops furnished by it. The strength of the alcohol employed also exercises a certain influence. If the alcohol be at ninety, eighty, or sixty degrees, the number of drops furnished by equal quantities of the tinctures will vary directly as the strength of the spirit. Thus, the tinctures of belladonna, digitalis, &c., which are made with alcohol of low strength, give forty drops to the gramme; resinous tinctures, as the resin requires a greater proportion of alcohol, give fifty drops; with alcohol of ninety degrees we have seventy drops. Water, of all fluids, gives the smallest number of drops (twenty to the gramme); this arises from its tendency to adhere to the sides of the glass. Chloroform gives more than double. The following are the relations between quantity and drop-measures for some of the remedies most commonly employed:

1 gramme of	distilled water gives		20	drops.
"	laudanum	"	38	"
"	black drops	"	40	"
"	chloroform	"	54	"
"	tincture of aconite, belladonna, or colchicum gives		58	"
"	ethereal tinct. of digitalis, gives		96	"
"	sulphuric ether, gives		98	"

THE ACTION OF MORPHIA.

As the result of a long series of experiments on cold and warm-blooded animals, Dr. Ludwig Witkowski comes to the following conclusions with regard to the action of morphia:—1. In a degree proportionate to the dose, which varies in different animals, morphia causes paralysis of the cerebral centres for sensation and voluntary motion. 2. The paralysis of these centres is not preceded by irritation or increase of excitability, but the various symptoms which have been thus explained are due to disturbances in the equilibrium of the separate functions of the brain. 3. The respiratory centre is the last to become paralysed, and paralysis of this centre is the only or main cause of death. 4. The centres for the inhibitory fibres of the pneumogastric, for the vaso-motor nerves, and those regulating the contraction of the pupil are not directly influenced by morphia as regards either irritation or paralysis. 5. Morphia increases the reflex excitability of the spinal cord. 6. Morphia does not affect the peripheral nerves, whether motor or sensory, or the organs in which they terminate.

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THE CINCHONA PLANT IN CENTRAL AFRICA.

We notice with pleasure that an attempt is about to be made to cultivate cinchona, tea and coffee in Central Africa. The experiment will be tried at Livingstonia Mission on Lake Nyanza, and the young plants will be supplied by the Madras Government. There seems little doubt that before many years are over Central Africa will be opened to the world. It is much to be desired that extended fields for the cultivation of cinchona may be found, and that greater abundance of the plant may reduce the present high price of quinine.—*Medical Examiner.*

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COLLECTANEA AND ANSWERS TO CORRESPONDENTS.

AUTOGRAPH LETTER OF EDWARD JENNER.

J. R.—Many thanks for the autograph letter of Dr. Jenner. We cannot fix the date, but suppose it to be about 1815, as the letter is addressed to his son, Robert Jenner, then a student at Oxford.

Upon this supposition, Jenner must have been at the time, 69 years of age ; but his age would hardly be inferred from the writing, which is clear and flowing, and the vein of humor more like that of a young collegian, than of an elderly gentleman.

The enclosed portrait and silhouette are quite good, but do not equal the mezzotint from the portrait by Northcote, nor are they as good as the portrait of him in Gillray's famous anti-vaccination carricature, or " in Bolt-court." This is a matter of opinion, however, and does not at all diminish the pleasure we have in owning an autograph of the man who did more than any other person in the world's history, to save life and disarm a loathsome disease of its horrors.

CHLORODYNE SUBSTITUTE.

Dr. Gilman, in *Boston Medical and Surgical Journal*, gives the following as a formula of a new *Elixir Chloroformi compositum*, a substitute for the secret nostrum known as chlorodyne :

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Chloroformi, ʒ ij.
Glycerniæ, ℥ ij.
Spts. vini rectificati, ℥ ij.
Spts. Menthæ piperitæ, ʒ ij.
Acidi Hydrocyanici dil., ʒ ij.
Tinct. Capsici, ʒ ij.
Morphiæ Muriatis, gr. viij.
Syrupi (treacle), ℥ iij.

Dose for an adult, one teaspoonful : for a child one year old, three to five drops, diluted with water, repeated at proper intervals if necessary.

TALKING PHONOGRAPH.

The world has hardly regained its composure since the telephone was announced by Mr. Bell. The *Scientific American* for December 22d, has an illustrated article by Mr. Thomas A. Edison on the "Talking Phonograph." It records by indentations on a cylinder the sounds uttered by the telephone, storing them up to be reproduced when desired, by a mechanical arrangement. What this new phase of creative genius has in store for us we dare not imagine, but it has been rendered possible now that the very tone of voice' as well as the identical language may be transmitted through a period of time indefinitely remote.

ONE OF THE POULTICES.

We present a specimen receipt two hundred years old, which will hold its own with some of the sure-cure diphtheria applications so often met with in the newspapers of the day :

Take "A swallow's nest ; Album Græcum 2½ ounces ; Althea, White lily roots, of each one ounce ; figs and dates, of each number three ; Boil them in water to a poultice, and add—oil of violets, camomile flowers ; fœnugreek, linseed, white meal, of each 6 drachms ; the brain of a cat : the powder of a burnt owl and of a burnt swallow, of each two drachms ; yolks of 2 eggs ; saffron one scruple. Make a cataplasm." "It is good in a desperate quinsey, applied often hot to the neck."—*Medical Times and Gazette.*

SUPPRESSION OF OPIUM SMOKING IN CHINA.

The Emperor of China has issued another edict against opium smoking, especially by officials, scholars, and in the army it is to be forbidden throughout the country; the prohibition to come into effect in three years time. Generals, Governor-Generals, and the Governors of the various provinces, will, meanwhile consider and draw up local regulations for giving effect to the order. It is said that the Chinese in London have persuaded the Imperial Government to take this step.—*New Remedies*, December, 1877.

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The *Frypans Americanus*, figured in a December number of *Harper's Bazar*, will be recognized by most of our readers as the monster which carries bad health to the door of the humblest cottage and many of the homes of luxury. Boards of Health would do more good by sending the illustration of the dread creature to the people, than by multiplying "Blue-books."

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I used to wonder why people should be so fond of their physician, 'till I recollected he is the only person with whom one dares talk continually of one's self without interruption.

HANNAH MOORE.

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Dr. Wm. M. Mastin, of Mobile, would be pleased to correspond with an physicians who have performed "Tracheotomy for pseudo-membranous, or true croup and diphtheria," as he is collecting statistics of these operations.

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Treatment of Ague in China.—It is always a matter of interest to compare our treatment of malarial diseases with that of other countries, and so far the practice in the Southern States of the Union is not excelled. But in China, Dr. Dudgeon, of Pekin says, "a combination of arsenic, spiders and beans is highly extolled when it is desired to cut short an attack in a spirit-like manner. It is somewhat remarbable that the Chinese for thousands of years have been following a tonic and arsenical treatment."

Harmless Coloring for Dietary Articles.—A harmless green coloring has long been a necessity with dealers and housekeepers, as certain articles of diet are esteemed in proportion to their color.

One can be made after the following manner: Dissolve chlorophyll in caustic soda, and then precipitate with alumina. Treat the precipitate with phosphate of soda, saturated by the acid phosphate of lime, and a pure green coloring is procured, which fixes itself permanently and is perfectly innocuous. As articles of diet were formerly colored with poisonous salts of copper, this fact is worth noting.

Committee on Hydrophobia.—The British Medical Association has appointed a committee consisting of Mr. Callender, Dr. Burdon-Sanderson, Dr. T. Lauder Brunton, and Mr. Ernest Hart, to organize an investigation into the causation, pathology and treatment of rabies and hydrophobia; and the committee of the Council Association have granted the sum of £100 towards the expense of the inquiry.

An easy way to determine sweating of the skin in those skin-diseases in which it is desirable to know it, may be demonstrated as follows: Apply a piece of bibulous paper upon the skin for a sufficient length of time, and afterwards pass a stick of nitrate of silver over the moistened surface. The stains of the chloride reaction will indicate the presence or absence of sweat.

Diphtheria in San Francisco.—We learn from a circular "Reports of Deaths," in San Francisco, sent us by an esteemed North Carolinian, Dr. John L. Meares, Health Officer of San Francisco, that there were 45 deaths from diphtheria in a population estimated at 300,000. With the exception of phthisis pulmonalis, which for the same month is 49, the highest mortality is attributed to this disease. For the same period, out of 39 deaths among the Chinese population of that city, 33 were from unknown causes.

The Science of Temperance.—Dr. B. W. Richardson, (*Medical Times and Gazette*), says in course of remarks on other matters connected with temperance. 1st. The substance now called alcohol is not a food. 2d. That common alcohol is not a specific gift sent any more than other chemical bodies. 3d. As physiologists, &c., they saw no provision for any other liquid than water. (How about milk?) 4th. That Ethylic alcohol does not act often in the manner of a food at all, but produces effects phenomenal in their character.

A fatal dose is a drachm to every pound weight of the animal taking it. To a man of 120 pounds, 15 ℥ would be a fatal dose unless medical aid was rendered.

A Sign of Hemoptysis.—M. Paul, of *Société Thérapeutique* says, that a sure sign of hemoptysis is found in the recurrent pulse. If while the finger compresses the artery at the wrist, a pulsation is felt in the hand, we may feel certain that the patient will spit blood. During the last ten years in which he has paid attention to this point, he has came to regard this sign as certain.

Carbolated Camphor in Diphtheria.—The employment of the above remedy as a special application was brought to the attention of the *Société de Thérapeutique* by Dr. Souley. Its utility is chiefly due to the power it has in arresting the spread of membrane, in those cases in which its propagation is very rapid. Under the contact of carbolated camphor the pseudo-membrane seems to lose its vitality, without irritating the surrounding parts, a difficulty attending the employment of many preparations now in use. The solution employed is made by dissolving powdered camphor in a solution of crystalized carbolic acid in alcohol (nine parts of the acid to one of alcohol). It may be employed pure, or diluted with sweet or almond oil.—*Gaz. Hebd.*, November 23.

BIOGRAPHICAL NOTICES OF EMINENT PHYSICIANS.

North Carolina.—Dr. Charles Harriss, a native of North Carolina, served in the Revolutionary war before he had completed his medical education. He first practiced with success at Salisbury, but removed to Favonia, the name of his plantation in Cabarrus County, where he remained actively engaged in practice to the close of his life. Ninety-three physicians studied with him, his reputation being such as to make him a desirable preceptor. His professional life extended over forty years (b. 1763 ; d. Sept. 21, 1825.) Dr. James Norcom, a native of North Carolina, commenced practice at Edenton in 1799. He acquired a large but laborious business, often visiting patients at a distance of 100 miles, on horseback. His practice was chiefly that of a physician, although performing such surgical operations as usually fall to the lot of rural practitioners. His obsterical practice was large. In 1812, he was commissioned Assistant Surgeon in the U. S. Army, but resigned in January, 1813. He wrote a paper on the Winter Epidemic of 1816, and made a number of contributions to medical journals. (b. 1788; d. Nov. 9, 1850.) Dr. James H. Dickson, a native of North Carolina, having practiced for a couple of years in South Washington, removed to Fayetteville, where his practice became large. In 1835, he divided the tendo Achillis, for the relief of club-foot. About this time he ligated the external iliac artery. He was everywhere recognized as a skillful and successful surgeon. Dr. Benjamin Robinson, a native of Vermont, commenced practice in his native place, but removed to North Carolina in 1804, and settled at Fayetteville, where he spent the remainder of his life, laboriously engaged in his profession. While a student of medicine, he performed an operation for the relief of strangulated hernia, with success. He was distinguished through life for his untiring assiduity and common sense. His memory is still cherished by the descendants of the community in which he passed his useful life. (d. March 8, 1857, aged 82.) Dr. Charles E. Johnson, a native of North Carolina, settled in practice at Edenton, and thence removed to Raleigh in 1835. He was especially interested in nervous diseases and physiological studies. He wrote a paper on the Medico-Legal relations of Insanity. (b. March 15, 1812; d. April 1, 1876.) Dr. Armond John DeRosset was a native of North Carolina, and a graduate of Princeton College. His immediate ancestors, father, grand-father, and great grand-father, were physicians. The duration of his practice extended to 62 years. He was a good classical scholar, and a cultivator of the sciences, which he applied to the practical and every-day requirements of his profession. (d. April æt. 92.) I will also mention Drs. James J. Phillips, of Edgecombe county; James Fergus McRee, of Wilmington; R. H. Shield, of Winston; Wm. H. McKee, of Raleigh; Wm. Perry, of Franklin county; Elisha Battle, of Edgecombe county; Henry M. Shaw, of Currituck county; Joel B. Houston, of Columbia; Matthias E. Sayer, of Edenton; Simon J. Baker, of Raleigh; and Pinckney Caldwell.—*Toner's Address on Medical Biography.*

OBITUARY.

M. BARTH.

The announcement is made of the death, last month, of Professor Barth, whom our readers will remember as joint-author with Professor Roget, of the Manual of Auscultation and Percussion.

MARTIN PAINE, M. D. LL. D.

Dr. Martin Paine, LL. D., Professor Emeritus in the University of New York, has, after a long and honorable life, been called to his reward. He was a very voluminous writer; but expended his abilities in holding fast to that which he thought good, rather than in contributing to the advancement of modern medicine. His respect was more for learned tradition than for the simple spirit of observation, hence his ploughshare leaves no deep furrow in our field.

WILLIAM R. SHARPE, M. D.

The death of our esteemed and beloved friend, William R. Sharpe, M. D., which occurred at his late residence, in Fulton, Davie county, N. C., on the 21st of November, 1877, cast a gloom of darkness over the community in which he had so long lived and served, and the medical men who knew him, and with whom he had mingled at the Medical Society's meetings of this, his beloved State.

He entered his medical career in the spring of 1851, graduating at this time, at the Jefferson College of Medicine, in Philadelphia. Since this time he has been zealous and faithful, both to his people and the medical profession, at all times and under all circumstances, adhering with rigid strictness to the medical code.

Feeling much worn and desiring to rest, he spent his time during the winter of 1876, and spring of 1877 in New York, at the Bellevue Medical College, admitted to the *Ad Eundum* degree of that institution. He returned home refreshed, both in body and mind, and entering his professional duties with renewed activity.

For some few days before his death, he had been taking a dose of quinine before breakfast for a slight cold. On the morning of the 21st, he made the sad and fatal mistake, by taking about five grains of morphine, which took immediate effect on his cerebral organism, rendering him almost completely narcotised in a few minutes. Medical aid was called; but did not reach him until about 1 o'clock. At this time he was completely narcotised and no good could be done for him. Atropia and other remedies were administered with no effect.

He slept quietly and sweetly, expiring without a struggle at 8 o'clock, P. M.

He was born November 30th, 1822, and died November the 21st, 1877. Aged 54. J. W. F.

Fulton, N. C., December 20th, 1877.

COMPOSITION OF QUACK MEDICINES.

With regard to most of these preparations, there is no secret, as thousands of analyses by competent chemists have supplied revelations which would fill volumes. This is, however, of no avail, for neither the chemists nor governments are disposed to incur the expenses which would be required to make known the deceptions of these widely advertised compounds.

RICHTER states that among 938 secret remedies analyzed by him, he found, First: 22 per cent. contained substances of violent or poisonous action; and second: 25 per cent. which, although less active, yet were possessed of medicinal power; while third: 52 per cent. were of no importance, or quite inoffensive. The first category especially comprises violent and poisonous agents for the skin and hair; opiates for children, capable of inducing cerebral disease and even death; "purifiers of the blood," composed of arsenic and mercury; and a whole legion of violent purgatives capable of doing in inappropriate cases an immense amount of mischief. The third category comprises preparations which have nothing in common with the noxious and poisonous effects produced by those of the first and second, but yet agree with them in being sold at from five to a hundred times their proper value, and thus constituting robberies. All these attacks on the public health and morals, take place with the full cognizance of the public authorities.—*Lyon Médical.*

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Medicine of to-day owes very much of its efficiency, and doctors of to-day owe very much of their success to the great improvements in pharmaceutical products. One preparation which has been of service to us, representing the element of an invigorating tonic and nutriment, by saving us all the uncertainty which we encounter in leaving the preparation of concentrated diet to unskilled nurses is COLDEN'S LIEBIG'S TONIC. In that stubborn nausea, incident to chronic alcoholism, and loss of appetite in our debilitating summer season, it has been of so much service as to induce us to know more about it. It is not a secret preparation, as the proprietor will furnish the formula on application.

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NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

Number 2. Wilmington, February, 1878. Vol. 1.

ORIGINAL COMMUNICATIONS.

THE EARLY RECOGNITION OF LUNACY.

By M. J. DeRosset, M. D.

If any further progress is to be made in the therapensis of insanity it must probably be in the application of remedies and measures of a preventive nature, made in the prodromic stages, before the mental phenomena have been evolved, for it is almost certain that the percentage of cures obtained in our Insane Asylums, under their present benign management is hardly susceptible of any material increase. The ratio of mortality may be diminished; individual suffering may be lessened; and the average duration of life among the unfortunate alienated be lengthened; but the number of asylum inmates to whom reason returns will, it is believed, never be relatively greater than now.

Has then the ultimate extent of our power in the prevention and cure of lunacy been attained? It were sad in its significance to society and marked in its commentary upon our science if we were forced to an affirmative in this inquiry, but fortunately the outlook is not so bad, and the object of this paper is to indicate in which direction a line of further progress lies.

It cannot be too strongly urged upon the profession, particularly general practitioners, that with them, far more than with the asylum superintendents, is the greatest promise of material advance in the cure of insanity; for every part of its history has been diligently explored, except that which exists before it comes under the observation of the expert. The family physician alone, from his constant and intimate relation with his patients, is in position to see the mental cloud while it is yet a mere speck upon the horizon, and to foretell in its curative stages a disease which, if it pass unheeded, sooner or later numbers its victim among the confirmed insane, and reduces his chances for recovery to those of the average asylum inmate, seldom greater than thirty per cent. No sympathy with family pride or any baser motive should be allowed to oppose itself to the practitioner's duty—humanity, morality, science, all demand a recognition of facts when their existence is declared by the methods which we shall later point out.

Let it then be well impressed, that in the history of nearly every case of lunacy, there is a prodromic period when reason is as yet uninjured, and which is possible of recognition, and in which a favorable prognosis under wise treatment, is fully warranted. There is no sudden leap from reason to dementia—*natura non facit saltus*—the passage from one to the other is through an infinite variety of gradations, each successive advance probably having its genetic factor in pathological changes, so that it has been fairly remarked, by one competent to speak, "*Entre la raison et la folie confirmée il existe une période raisonnante de toute nuance.*"*

A better knowledge of the etiology of lunacy is now prevalent even outside of the profession, and the old metaphysical conception of it is yielding to the proper view which sees in it a diseased state of the body, in which a disturbance of the psychical functions is the grand symptom. In no sense is it a special Divine visitation further than may be said of any malady, and the sooner practitioners recognize that every instance of mental aberration is due to encephalic or rachidian changes, the sooner will their eyes be opened to a possibility of curing their cases before permitting them to reach that stage when society and the patient's own safety demand his occlusion within the walls of the mad house, over whose doors might justly stand the old inscription,

"*Voi che entrate*
Lasciate ogni speranza."

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* Bigot, Des Périodes Raisonnantes.

The terrors of these institutions have, it is true, almost wholely passed away, under a wiser and more humane management, but the asylums even now are not free from conditions unfavorable to recovery, for at the best they entail an intermingling of discordant natures, and it is easy to see how the scale may be made to turn against a mind already trembling in the balance, by rude contacts of course and refined, by the stimulus of exciting emotions, or by the arousing of passions and thoughts that loose the mind from the reins of reason. These possibilities are, we admit, guarded against by great forethought, but the difficulty is inherent in the system, and cannot be eradicated while the asylums are, as now, pressed to their very doors with inmates. When provision is made to admit of a segregation based upon condition and educational and social rank, as well as upon sex, then the defect may be in a measure remedied, but for the greatest measure of relief we must provide against overcrowding the asylums by treating our patients in those stages while yet it is possible to prevent the confirmation of their malady.

That insanity is a condition arising from actual alterations in the cerebral mass or its connections is now too well established to require additional evidence. The negative results of the earlier autopsies were clearly due to the coarse methods by which they were made, and must pass for nothing when compared with the demonstrations of modern pathology. Thus Clouston* has shown that pathological changes of the most obvious kind may be found in or about every insane brain;—adherent and thickened membranes, congested and toughened folds of the pia mater—adherent to convolutions, blood coloring matter, and even thickened and condensed cranial bones, affecting by pressure or by continuity of pathological process the delicate cerebral substance.

Atkins † and Kesteven ‖ are additional modern authorities in support of these views, but to cite all who are available would lead us too far from the object of our paper.

The extent and quality of histological change essential to produce a recognizable amount of mental aberration will probably never be determined, for the power of the brain to withstand very severe accidents, and its intolerance of apparently trivial injuries are so contradictory in the information afforded, that no definite esti-

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*Jour. Ment. Sci., No. CII. p. 349, et seq.
†Dub. Jour. Med. Sci., January, 1877, p. 42.
‖St. Barthol. Hosp't. Reports XII, 1876, p. 52.

mate can ever be assumed for a given case. Still it is known that faulty conditions in the circulation or quality of the blood often induce minute trophic changes in the delicate neurilemma and connective net-work, which, from their intimate association with neurine or nerve substance, cannot fail, even at the outset to give rise to abnormal expressions of intellectual, sensory or motor functions.

Which one or more of these departures from the normal, is most likely to be met with, will depend, as demonstrated by Hitzig, Ferrier, Seguin, Bartholow and others, upon the location of the pathological process. As yet, we are unable to accept Brown Séquard's theory of non-localization.

It is impossible in the light of our present knowledge to indicate all of the manifestations which a careful analysis would reveal in what we have called the prodromic stage of insanity. Nevertheless, many of them may be inferred, and doubtless will be found in varying degrees of exaltation or depression of intellect, of sensation, of motion and of nutrition.

Behind the histological changes which give rise to these abnormal symptoms, lie, of course, an infinite number of causes, some existing within the body, as when mania follows other diseases, some acting from without through the organs of perception, inducing a degree and kind of cerebration that tends to pathological results. Active cerebral hyperæmia, for instance, may arise from almost any circumstance or condition, internal or external; this may tend with continuing cause to perpetuate itself, leading to changes in local nutrition ; or it may progress to a limited or general inflammation, with plastic effusions, hyperplasms, &c. It may be, and often is followed by œdema, with overfilled veins, and stenosis of arteries.

This, or some portion of the scheme, is probably the first pathological step in every case of mental aberration. In a measure, as the progress is rapid will the manifestations arrive, and as the process is general or confined to minute areas, so may we expect the symptom or group of symptoms to vary from that which, if taken singly, would give rise to no suspicion, to others which are unmistakably the evidence of approaching insanity.

We shall not undertake to point out all the subjective and mental symptoms, which, indeed, may elude the search of the acutest observer. There may be pain, strangely or persistently located, irregular muscular action, actual or feigned paralysis, absurdity in ideas or expressions, vagaries in morality, religion, ethics, and aesthetics, melancholia, frivolity, &c., in a word, any departure from that which has always marked the nature and habits of the individual. Our object leads us not to speak particularly of these, but whether with them we may not find other concomitant symptoms that shall confirm the diagnosis, and lead to proper therapeutic and preventive measures.

To facilitate our purpose it may be well to recall briefly the semiological data which we are to look for, and the directions in which they are to be sought. Conspicuous and of prime importance are disorders of the circulation, excess or deficiency of heart tone—high arterial tension, venous sluggishness,—alterations in the quantity or quality of the excretions, abnormal temperature, impairments of nutrition, and the *intra-ocular phenomena.* A careful observer will note all of these, aiding his powers by the use of the various instruments of precision. It is hardly to be expected that the sphygmograph, notwithstanding the valuable information it gives, will come to be very widely employed, but no practitioner at this day does his whole duty who neglects to use the thermometer in the study of his cases, or who habitually disregards the value of examining the urinary excretion. These things are so obvious that it is useless to our purpose to dwell upon them ; nor would we have it inferred that any of these methods taken singly, or without coexisting traces of the subjective phenomena recited above, are to be held as conclusive of approaching lunacy, whatever they disclose ; but they are factors in the solution of a delicate question, and may become potent in enabling us to arrive by exclusion at a knowledge of a cerebral trouble, in its incipiency. It is upon the *intra-ocular phenomena* that we would expend the remaining pages of this paper. And here we approach the confines of a controversy which has been long and ardent—as to whether the condition of the intra-ocular circulation furnishes an indication of that within the cranial cavity. Dr. Hughlings Jackson, although not an ophthalmologist, has made himself very expert in the use of the ophthalmoscope, and lays great value upon it as an aid to diagnosis in cerebral pathology.

The anatomical relations of the optic nerve and retina and brain, would, upon *a priori* grounds, lead to the inference of their common participation in circulatory disturbances, and it has been found that pathogenetic processes going on within the brain do cause decided changes in the optic nerve, retina and choroid. The phenomena of "choked disc," or engorged papilla, was the field of controversy, Von Graefe, being the first to recognize the connection between it and affections of the brain. After Schwalbe's discovery of the direct communication between the subarachnoid space and the sheath of the optic nerve, which permits the passage of the cerebro-spinal fluid within the sheath, it was maintained by many that a "choked disc" was always due to that fact, the fluid being driven thither as alleged, by the existence within the cranium, of some coarse disease, as a tumor, infringing upon the arachnoidean cavities. Mainz* and most ophthalmologists hold to that view. But Bouchut† has lately shown by an analysis of 472 cases of tubercular meningitis (of which 463 were recognized by the ophthalmoscope) that *changes in the papilla were manifest before there was any evidence of internal disease.* These changes are represented by swelling of the disc, redness, and subsequently a hazy, grey veil which later extends to the retina. Not only ordinary meningitis, tubercular meningitis and other cerebral inflammations induce these appearances, but *insanity* likewise, besides often giving rise to unequally wide pupils, is frequently marked by inflammatory and atrophic changes in the disc‖ doubtless a part of the process within the cranium.

Bouchut, therefore, does not hesitate to restore Graefe's theory to the position from which it had been displaced, going farther and declaring that not only do processes which determine filling and tension of the cavernous sinus lead to these changes in the papilla, but that a similar effect is produced from pressure upon any of the great sinus of the brain. Schwalbe's theory is defective, because, although infiltration of the optic sheath happens in meningitis, it also happens in many other maladies, as pneumonia, whooping cough, croup, phthisis, &c., in which papillary swelling is seldom observed.

There can be no doubt that even minute changes in the circulation of the brain, of a congestive, inflammatory or trophic nature induce corresponding changes in the eye, without the existence of coarse disease, and in spite of the efforts which have been made to

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*Graefe and Saemisch Handb. der gesam. Augenheilk. Bd. VII, 1st Haelfte.
†Gaz. des Hôpt., Dec. 11, 1877.
‖Graefe and Saemisch, &c.

show that the collateral anastomoses of the ocular vessels with the facial are sufficient to relieve the conditions which would arise from impediment to the flow of blood within the cranium. And this may also be said of troubles which have their origin in the spinal cavity, for tabes dorsalis is often foretold by optic nerve atrophy, which may precede all other symptoms by several years.

Whether "cerebroscopy" by means of the ophthalmoscope shall ever be established upon as firm and reliable a basis as has been Laennec's great methods of exploring the chest, is not exactly pertinent here, but enough has been already established to show that the ophthalmoscope which hitherto has been limited almost exclusively to the requirements of ophthalmology, ought to be in the hands of every physician, in daily use, to discover the earliest evidences of many diseases which are remediable only at their outset. It has, it is true, been to a certain extent employed in the study of insanity, but not in its prodromic stages; and here is a broad, new field which, of necessity, is open almost alone to the general practitioner, and not to the expert.

On this account, it is impossible now to describe with anything like preciseness the appearances within the eye, indicative of cerebral processes, which, if uninterrupted, would end in lunacy. But it is certain that they may in a large percentage of cases be found, and may consist in retinal injection, venous fulness and pulse, small exudations, engorged papilla, neuritis, and later, the deeper seated alterations in the choriod. It may here be remarked that it is common to meet with cases of neuritis existing for months without any impairment of vision.

When the ophthalmoscopic picture presents any of these features, and they are not, by careful study, to be connected with any other disease or condition, then we are to regard them as of sufficient semeiological import to warrant the apprehension of threatened lunacy.

Now is the moment for a judicious therapeusis, and whether it shall be with bromides, chloral, opiates, cannabis, or whether relief is to be sought through hygienic measures in diet, exercise, bath, or through the psychic influence of change of climate, association, studies, amusements, idəas, must be left to the individual circumstances of each case.

Unfortunately, ophthalmoscopy is a bug-bear to the average practitioner, under the false impression that it presents obstacles which only long, patient practice can overcome. For the fine determination of errors in refraction, this is doubtless true, but the acquisition of the amount of expertness required in mere inspection of the ocular fundus is rapid and easy. For this purpose Liebreich's simple ophthalmoscope is the best, and any practitioner purchasing this from an instrument maker ought to receive gratis, if he asks for it, a short printed explanation of the method of its use. Only the reverse image is required in this study, and the pupil ought to be dilated with atropia, a solution of which, not stronger than one grain to the pint of water, will suffice. This, if applied twice, will secure an ample dilatation inside of an hour, without affecting the accommodation as the strong solutions do, and the effect passes off within twenty-four hours. A simple candle or lamp flame furnishes all the illumination required, and a "condenser" is unnecessary.

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HISTORICAL REVIEW OF THE DISEASES OF CUMBERLAND COUNTY.

Paper read before Cumberland Medical Society at December meeting, 1877, by B. W. Robinson, M. D.

Mr. President:—I have undertaken the performance of a duty assigned me at your last meeting—how satisfactorily you must judge. With permission, I speak of "*quam vidi et magna pars fui.*"

Of the endemic disease which prevailed in this region forty years and more ago, many have disappeared and of the remainder, the type of all has changed. The sthenic form was then the rule, and the lancet and calomel the chiefest remedies.

In the classification of fevers which claimed for their harvest time the summer and autumn months, the nosology of the systematic writers of the days of our fathers, recognized distinctively, intermittent, remittent and continued. Of the *first*, quotidian, tertian and double tertian, came under our care here, sometimes in different, sometimes in the same year. Of the second, remittent-bilious—notably mild and manageable some seasons—the next, perhaps, markedly intensified, and threatening fatal issue, and then again so malignantly pronounced, that to "lose a paroxysm was to lose a patient." Of the continued, synochus, synocha and typhus—the first named, and more common here, when the continued type was the belonging of the season, was intermediate to the other two. Of the last, in its graver form I have no recollection of ever having seen a pure case. But I have seen a tertian pass into a remittent and then assume the continued form, with grave symptoms and alarming character. This, in the days of which I speak, was known as typhoid, because resembling typhus, in the *muttering delirium, subsultus tendinum* and kindred manifestations, it indicated, that profound *cerebral* lesion and nervous prostration, which were regarded as pathognomonic of the typhus gravior, of British (systematic) writers—*and I have seen the inverted order, well preserved.* The synochus which we then saw, was essentially the so-called typhoid, of Louis. I know whereof I speak, for I well remember in the year 1837, I had charge of many cases, one, at least, of which terminated fatally. An autopsy revealed the characteristic lesions of the glands of Peyer and Brunner, (solitary and agminate) in different stages, to the extent of ulceration—and perforation of the investing coats of the intestine—Dothinenterite, of Bretonneau. One season we had a form of gastric fever which yielded to nothing, so well as cupping over the epigastrium, and ice, internally medicated was harmful.

The diseases of the winter and spring months, belonged to the order of phlegmasiæ—particularly those affecting the respiratory organs, pleurisy, pneumonia, quinsey, etc., and among children, croup. The therapeutic agents then employed were, blood-letting, general and topical, phlebotomy, arteriotomy, bloody cups and leeching—calomel, tartar emetic evacuants. The teaching and practice, was the lancet, *ad deliquum animi*, calomel in scruple doses for many repetitions and then in diminished quantity until the constitutional effect indicated by ptyalism, was induced, and tartarised antimony in ½ grain, 1 grain, 2 grains, and larger doses, in ascending grade, until *tolerance* was obtained, according to the Italian (Rasori) method. A practice advocated by Laennec, the then authority in chest diseases.

A physician of the present day may wonder at an assumed unjustifiable practice, which the observations of *his* time would not at all warrant, but he would have been a bold man to denounce, or a timid, to hesitate to do, that which was required by the common consent of a class of practitioners quite as intelligent, patiently observing, and closely reasoning, with their then existing lights, as the profession had then, or has now in its ranks. Solidism and humoralism were mooted dogmas. Among American teachers, Chapman, the eloquent advocate of the former, was met with vigor in his enunciations by Eberle in his advocacy of the latter. The Brunonian theory was not altogether displaced by the captivating, perhaps ephemeral, doctrines of Broussais. He of the present time who accepts the cellular pathology of Virchow may plume himself on his advantages—and while asthenic conditions rule may be disposed to sneer at what *he* thinks the errors of a former day. Yet morbific causes whether emanating from climatic changes, telluric or atmospheric sources, impressing their form, may ere a great while compel a resort, though in a probably modified application to a practice once called *heroic,* but nevertheless for the time successful. Malarial elements seem to be in abeyance hereabouts now, and hygienic teachings and practice must do much to prevent the occurrence and stay the spread of maladies and to diminish the "death-rate." But I apprehend that the cycle of time involves the cycle of disease.

The "epidemic constitution" of different years impressed varying type on the diseases of a season and necessitated a correspondingly varying treatment.

The only safe plan, was therefore, to observe and study closely the earlier cases. These would bear a tentative course, which the later ones of the advancing season would not brook with impunity. And he was unlucky who had not worked up to the occasion.

For more than a decade of my knowledge as student and practitioner, the lancet was not only borne well, but demanded. In 1842, however, the blood-letting hand had to be stayed. It was unsatisfactory and hurtful. That year furnished proportionally to the sick more fatal cases than I remember of any other year of which I was cognizant. The disease was then popularly known as brain fever—of a rather obscure, in some instances, and pronounced remittent form in others. A "touch of the typhus" as the laity had it, or suspicion thereof, carried dismay to many a hearthstone.

The first cases of diphtheria I ever saw, occurred here in September, 1855. In a household of eleven persons embracing a grandmother, and parents, six had the disease—the mother and five children; of the latter, two died, from invasion of the larynx and trachea (croup). Two remote points in town, furnished each a case, resulting favorably, and without extension though the surroundings favored it. If another of our members had it not for the subject of a paper, for this meeting, I might be disposed to dilate.

I said, many of the diseases which had an abiding place in this region a long time ago, had disappeared. Notably two occur to me at this moment—pleuritis and what is often spoken of as old fashioned bilious fever. I have seen no example of either for the past ten years or more. Pleuropneumonia we occasionally see.

Contrasting the present with the past, the to-day, with the time referred to in the beginning of this paper, there has been noted for ten to fifteen years, a progressive sanitary improvement. It might not be gainsaid that this *was* once a sickly locality—it may not be truthfully said that it *is* now. General as well as local causes have contributed for many years to entitle us to good report, and we claim to be as exempt now from malarial and other affections, (and those occurring as tractable) as the most favored sections of the State. Our mortuary lists will attest this claim, where professional aid has been sought and rendered.

Mr. President, I am aware that this sketch is very imperfect, even in what I had proposed. My purpose was to speak of diseases *indigenous* (if I may be allowed to use the word in this connection) to this region. Many other maladies common to all sections I have not mentioned, though, of them we have had our share. We have not enjoyed more immunity from the visitations of epidemics than other places, but generally, they have assailed us, less frightfully, not perchance, for that we were better weaponed, but alert—with the good dame nature on our side and being willing to coax her, and heed her beckonings.

HISTORY OF DIPHTHERIA IN FAYETTEVILLE AND VICINITY.

Read before the Cumberland Medical Society at the December meeting, 1877, by W. C. McDuffie, M. D.

Diphtheria has only prevailed *as an epidemic* in Fayetteville and vicinity, twice in the past twenty-five years; first in the summer and fall of 1862, and secondly in the summer and fall of 1876. As far as I have been able to learn, it was not known or recognized as a specific disease in an *epidemic form* in this county, prior to the first named date; though it did occur sporadically here before that time, and in some cases with great malignancy, as the older physicians can call to mind. In August, 1862, the disease made its appearance in this place, spreading very generally over the county by the middle of September, reaching its highest point of fatality by the first of October, and it was November before the epidemic disappeared. From that time until the August of 1876, we had but occasional, sporadic cases of diphtheria. The country, however, west and north-west of us, in adjoining counties, had been frequently and fearfully scourged by this terrible enemy to childhood.

The second invasion of the epidemic in our midst occurred about the first of September, 1876, and spread over the entire community, and about the middle of November it again passed off, leaving in its wake some sad recollections of its visitation. It reached its greatest fatality about the first of October as the other did. From that time to the present, we have met it frequently in isolated cases; while we hear again and again of its prevalence in adjoining counties as an epidemic.

The disease did not appear here in either of its visits "side by side with scarlatina."

The type of the disease was distinctively febrile with tendency to debility, but comparatively mild, especially in the last epidemic. I say comparatively, for we must admit, that both, from correspondence and from many personal interviews with experienced and intelligent physicians of the surrounding country, who have battled with this monster year after year, and season after season—we have had a lighter or milder form than they. The ratio of deaths with us, *never* reaching twenty per cent. Why there should be this difference, or why the disease should be modified—if indeed, it is so modified, by malarial influence, I think the present state of medical science fails to answer satisfactorily, but the history of the diseases, as far as I have been able to trace it, shows a greater virulence of symptoms in sections free from miasma, than obtain where malarial disease exist. In proof of this fact, diphtheria has not visited even sporadically, at any time, nor during either of the epidemics which we had, the section of swamp land east of the Cape Fear river immediately opposite our town and above and below, for the space of, at least ten miles. This area is thickly populated, taken upon an average, and it is well known from time immemorial it has been the very cradle of miasmatic fevers. Whether this immunity, I say, be due to existence of malaria or to some topographical advantage, I am unprepared to declare.

It is not my province in this paper to go farther than the *history* of diphtheria in this county. I shall pass over much that could be said of pathology and treatment; we must, however, understand something of its pathology as we go along with its history to enable us to answer the question as to its contagiousness; considering it proper to class it pathologically with the typhoidal febrile diseases in all of which there is an inherent tendency to degeneration of the properties of both solids and fluids throughout the system. We answer the question as to its contagious character, by saying that this impairment, above alluded to, is caused either by the introduction of some subtle poison into the blood in the form of an infection, contagion or specific miasm, which by its presence changes the character of the blood and thereby its relations to the tissues, or by some occult atmospheric condition which brings disease and death where health and life prevailed. We see in it a contagion spreading as other epidemics do, by the specific taint with which it loads the air, and at the same time, it is often observed that it is conveyed to the healthy individual by actual contact, where the exposure is great.

While the disease has not been strictly confined to children, yet it shows its favorite subjects are children from 2 to 12 years of age.

The period of incubation is a little less than one week.

All the cases do not "present the characteristic deposit" in the throat; while the peculiar membranous formation sometimes actually takes place elsewhere—on abraded surfaces and yet no sign of it on the mucous membrane.

While "persistent vomiting" is a most distressing symptom and one that has been occasionally observed at the very beginning, yet it is *not* "a certain precursor of death."

"Is pseudo-membranous croup always to be differentiated from diphtheria ?" I answer yes—the difference seems wide and distinct enough, for as one author says, "in croup the accompanying fever is symptomatic, and diphtheria is a symptomatic affection." One is caused by cold and confined to certain seasons and sudden changes of air. The other by contagion or specific epidemical influence irrespective of atmospheric vicissitudes. The one always *purely* inflammatory; the other generically typhoid. The adventitious membrane makes them resemble each other, but that is all. In the celebrated controversy on this subject during the year 1875, published in the London *Lancet*, many eminent men took part—Johnson, Jenner, Monckton and others. The latter says: "The acute and direct strangulation which is the *rule* in croup, is really the exception in diphtheria, and further, that croup has no such immediate surroundings of faucial glandular, paralytic and scarlatinoid brethren."

"In croup the air passages are primarily engaged, as another says, while in diphtheria the laryngeal affection is secondary to the disease of mouth and pharynx, and in croup there is absence of any characteristic odor of the breath, while in diphtheria the breath is often characteristically fœtid," and so on, many distinguishing features might be named.

My own experience has been that the form of diphtheria may vary in different epidemics to this extent ; that in some seasons more die in the suffocative stage, that is asphyxiated, precisely as in death from membranous croup, while at other periods, more die of exhaustion and cardiac paralysis—just as many other diseases vary in type at different times.

The invasion of the nares by the membrane has been observed to be a very serious condition, but not always a fatal one.

The best line of treatment was found to be *constitutional support from the very beginning* ; endeavor to arrest the deterioration of the blood, and to improve the general tonicity of the tissues; also to mitigate the violence of local inflammation, as it may exist in each individual case. Chlorate potassium has been much relied upon; quinine and iron and pure air; a mild purgative and alterative is of service at first, and to the fauces and tonsils in the first stage the local application of chlorate potassium alone may suffice, but where the exudative process appears to be going on rapidly in the throat, one of the best local applications is sulphate of copper in combination with tannin—10 grains of each to the ounce of water, as an astringent and antiseptic. In the latter stages, nothing has been found better than a saturated solution of chlorate potassium and tincture of iron, given freely as a drink, thereby serving the double purpose of a local and constitutional remedy.

As regards the sanitary surroundings, I believe we were able to have well regulated rules observed, both in country and town, and in no instance was a lack of sanitary measures the cause of the spread of the disease.

CLINICAL REPORTS.

SALIVARY CALCULUS.

To the Editors of the North Carolina Medical Journal:

You will find below a brief statement in regard to the calculus, which I cut from the tongue of Jane Yellowly. I will mention that I have another case, on whom I have once operated; it was a soft tumor, rather of a fibrous character, situated under and in the anterior third of the tongue, a little to the right of the frœnum. I cut it out easily, but find that it is returning, and I propose to defer the second operation until it is fully developed. This subject is a young lady 18 years of age, in fine and vigorous health, not at all inconvenienced by the enlargement up to this date. I will let you hear from me when I operate on her again.

Jane Yellowly, colored, aged 35, general health pretty fair made application to me, stating that she had a rock in her tongue. Upon examination, I found situated in the middle third, a calculus, which seemed to be imbedded in the muscular fibres, and not in either of the ducts of Wharton or Steno, as the flow of saliva was not in the least obstructed. The trouble complained of, was a weight, and an inability to use the organ in eating, but no difficulty in articulation. She willingly submitted to the operation, which was performed by introducing a tenaculum in the end of the tongue, held by a careful assistant, with instruction to make no more pressure than was absolutely necessary, and to control the movements of the organ. Being directly in front, I made an incision about the ⅛th of an inch in length, and down to the calculus, which was a little elongated. With the handles of the scalpel I so dilated the orifice, that with a pair of forceps I was enabled to draw out the stone.

The stone weighed 10 grains, and is represented of the natural size in the accompanying cut.

The hemorrhage was very inconsiderable, as I had with great precaution, avoided a division of any important vessel. There was some laceration immediately in the neighborhood from whence the calculus was taken. The wound healed kindly, under a mouth wash of tannic acid, is now entirely well, and the woman suffering not the slightest inconvenience.

Yours very truly, &c., JAMES W. ALSTON.

[Salivary calculi are very rare if we are to judge by the scarcity of reported cases in American, English and French journals. The only case we encountered after a diligent search was one reported in *Gaz. des Hopitaux*, in 1847, which by its description, we judge to have been of the same size of the specimen sent us by Dr. Alston. Since the above was put in type, we find a case reported in the London *Lancet*. Its composition is phosphate of lime, with a little triple phosphate.—EDITORS.]

REPORT OF A CASE OF HEMORRHAGIC MALARIAL FEVER.

By J. C. SHEPARD, M. D., Pender County.

I was called to see on November 3d, 1877, D. M. F., aged 32 years. On arrival, I found that my patient had lost a large quantity of blood by the urethra, and was in what I considered a moribund condition. On enquiry, I found that the patient, three days previous had been attacked with quotidian intermittent.

He had also been subject to chronic chills for about a year previous, which had very much enfeebled his constitution and rendered the case unpromising and extremely unfavorable as to the prognosis. I ordered in the start ten grains sulph. cinchonidia and five grains every four hours thereafter, with fluid ext. ergot as a hemostatic and sulph. morphia, to allay restlessness and procure sleep.

On November 4th, I found the patient in much the same condition as yesterday, with urine tinged with blood, and skin of a saffron hue—had been a recurrence of chill—debility great, on being raised in bed, extinction of radial pulse and syncope. Increased dose of cinchonidia six grains every four hours, ergot and an occasional dose of morphia.

On November 5th, he had a recurrence of chill, fever high, urine normal, bowels constipated, skin very yellow, tongue heavily coated, debility not so great. I ordered three doses calomel (3 grs. each) every 3 hours until taken. Cinchonidia as the day before, and suspend the ergot.

On November 6th, slight chill, perspired some just before the chill, bowels moved, fever not so violent, skin clearing—urine normal. Reduced dose of cinchonidia to 4 grains every four hours—morphia to procure rest.

On November 7th, condition of patient considerably improved, slight coolness at, or a little after the usual hour for the chill; fever moderate, tongue clearing, urine normal. Ordered the same treatment as the day previous, with instructions to let me know if he did not do well.

On November 10th, called in great haste to see patient, on arrival, found he had a slight recurrence of hemorrhage with increased chill and fever. Ordered six grains cinchonidia every four hours—ergot as before.

On November 11th, condition improved, urine normal. Ordered the same as day previous.

On November 12th, condition much better, perspired freely, no chill, appetite returning. Ordered 4 grains sulph. cinchonidia three times per day.

On November 14th, patient still improving. Ordered the same as on the 12th.

On November 17th, convalescent, and up about the room. Ordered 3 grains cinchonidia three times per day, with 15 drops Tr. ferri. chlorid. Within one month from convalescence, patient was in perfect health and remains so at this time.

In this case, as in the other more common forms of malarial fever, I have for the last year relied almost solely upon the use of sulph. cinchonidia and can testify to its efficacy.

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HEMORRHAGIC MALARIAL FEVER.

From the case-book of Wm. J. Love, M. D., Wilmington, N. C.

William B., market gardener, aged 17 years, came under treatment for intermittent fever, October 7th, 1877. He was a robust young man, of 145 lbs. weight. The usual treatment was resorted to.

On the 8th and 9th October there was no fever.

On the 10th October at 8 : 45 A. M. Thermometer indicated 104.6°, pulse 126. There was hæmaturia and epistaxis, countenance anxious, skin yellow, with nausea and vomiting. Ten grains of sulphate of quinine were directed every four hours, with milk punch composed of 1 ounce brandy in gill of milk, and one egg, every four hours ; hypodermic injection of ½ grain sulphate of morphia. At 9 P. M. vomiting has been relieved by the morphia until the last hour or two. Thermometer 104.6°, pulse 114. He has hæmaturia and epistaxis at intervals. Repeat the morphia. Continue the quinine and brandy treatment, with fluid extract of matico 1 ʒ every hour until hæmaturia subsides.

On the 11th October, 8 : 45 A. M. Thermometer indicates 102.4°, pulse 112. Less blood in the urine; three doses of matico have been administered. More or less epistaxis at intervals. Patient has vomited several times. Repeat morphia, and continue quinine and brandy mixture, and give matico when there is an increased amount of blood noticed in the urine.

1 : 50 P. M. Thermometer 104.4°, pulse 112, nausea and vomiting. There is blood in the urine—some clots. Epistaxis occasionally, lasting sometimes fifteen minutes before it can be arrested;

morphia re-administered; push matico; continue quinine and brandy mixture.

5 : 50 P. M. Thermometer 104.2°, pulse 118. There is less blood in the urine; nausea and vomiting persist; epistaxis continues at intervals. Matico to be pushed when urine exhibits much blood. Repeat morphia and continue quinine and brandy mixture.

10 : 30 P. M. Thermometer 104°, pulse 118. General symptoms as at last visit; treatment continued. Patient foreboding the worst.

12th October, 6 A. M. Thermometer 104.4°, pulse 112. Vomiting almost incessant. Great tenderness over the epigastrium. Add to the treatment a cantharidal blister, 10x12 inches to epigastrium.

11 : 45 A. M. Thermometer 101.8°, pulse 114. Restless; vomiting occasionally; little blood in the urine. Epistaxis occasionally. Quinine 6 grains every four hours, other treatment continued. The patient is expressing apprehensions of death.

6 : 05 P. M. Thermometer 101.4°, pulse 119. Hæmaturia ceased, but there is epistaxis at intervals. Some nausea and vomiting; he is somewhat delirious. Discontinue matico, but the other treatment is continued.

10 : 35 P. M. Thermometer 101.1°, pulse 114. Other symptoms as at last visit. Continue treatment.

13th October, 5 A. M. Thermometer 101.2°, pulse 108. Epistaxis with pale clots. Patient quite delirious at times. He has fears of approaching death. Continue treatment.

8 : 45 A. M. Thermometer 101.6°, pulse 118. No change in other respects.

1 : 15 P. M. Thermometer 99.4°, pulse 96. Collapse. Stomach ejects everything administered. Carbonate of ammonia 10 grains, spts. sulph. æther one drachm every hour. Leave off morphia and brandy mixture. An ounce of chicken soup every hour. Bottles of hot water in bed, and sinapisms; 2 grains of quinine every 4 hours.

2 : 30 P. M. Thermometer 99°. No other change, except that the stomach is more retentive. Continue treatment.

9 : 35 P. M. Thermometer 100.8°, pulse 104. Patient rallying somewhat. Skin is warmer; answers questions more rationally; is still fearful of approaching death.

14th October, 9 : 05 A. M. Thermometer 100°, pulse 104. General symptoms somewhat better. Ammonia and æther in same doses every two hours. The other treatment continued.

1 :15 P. M. Thermometer 100.4°, pulse 104. Rallying. Ammonia and æther continued every 3 hours Continued other treatment.

15th October, 9 :30 A. M. Thermometer 98.6°, pulse 96. Ammonia and æther every 4 hours.

6 :15 P. M. Thermometer 100.2°, pulse 92. The ammonia and æther are discontinued, and continue quinine. Ten drops of diluted nitro-muriatic acid are now given every four hours except at night. Food every four hours. Diet is to be milk, soups and eggs.

16th October, 9 A. M. Thermometer 98.6°, pulse 96. Quinine 2 grains thrice a day ; continue the acid.

2 :15 P. M. Thermometer 99.4°. pulse 90. Patient cheerful, and his appetite is returning.

7 P. M. Thermometer is 99.8°, pulse 99. There is no change in apparent condition of the patient. Continue treatment.

17th October, 10 A. M. Thermometer 98.5°, pulse 96. Continue treatment.

6 :30 P. M. Thermometer 99.2°, pulse 98. His condition is as at last visit.

18th October, 9 :45 A. M. Thermometer 98.8°, pulse 100. Patient begs to be propped up in bed, in sitting posture. No change in treatment.

19th October, 11 A. M. Thermometer 98°, pulse 90.

20th October, 12 M. Thermometer 98.8°, pulse 90.

22d October, 1 P. M. Thermometer 98.8°, pulse 78. Skin has nearly recovered its natural hue. His color is returning. Discharged with the injunction to take 2 grains quinine, morning, noon and night until after the occurrence of frost. No relapse to the 1st of January.

There were one or two evacuations of bowels during the attack, but there was no blood. The patient was relieved by enemata.

[The above case was not intended for publication, but is so carefully recorded as to make it a most graphic account of the malignant form of hemorrhagic malarial fever as we have seen it for the past few years. Recovery from such a seizure is not at all common, and we believe we could do our readers no greater service than by directing their attention to Dr. Love's very instructive case, and also to the case by Dr. Shepard which precedes it.—EDITORS.]

SELECTED PAPERS.

THE INFECTIVE PROCESSES OF DISEASE.

Being the substance of a Lecture on Pathology, delivered at the University of London,

By J. Burdon Sanderson, M. D., LL. D., F. R. S.; Professor-Superintendent of the Brown Institution.

THE GERM THEORY AND ITS RELATIONS TO THE RESULTS OF THE ANTISEPTIC AND COLYTIC TREATMENT OF WOUNDS.

[ABSTRACT.]

In this lecture Dr. Burdon Sanderson proposed to consider the two theories which had been put forward in this connection with infective processes—viz: the theory of *contagium vivum*, and the so-called *germ theory*. The theory of "contagium vivum" taught that when a contagious disease was communicated through the atmosphere or by personal intercourse, it was produced by means of specifically endowed organisms, which bore to the disease the same relation as the seed did to the plant, being sprung from it and growing into it. The other theory—that of germs—related to a different class of phenomena, and belonged much less to the physician than to the surgeon. It taught that certain organized and living particles which were always suspended in the atmosphere were the causes of the suppuration which prevented the healing of the wounds, and that if they were excluded the wound would enter at once upon the reparative process. The whole secret, then, of the successful treatment of wounds would consist in the exclusion from them of the atmospheric dust, which had the power of contaminating all liquids that were capable of putrefaction. With all respect for authorities, he could not but express his opinion as to the value of the germ theory as the basis of the treatment of wounds. He was personally convinced of the fact that putrefactive action in wounds might be prevented with almost absolute certainty. The practice of hospitals afforded all the test necessary; and no better proof could be obtained than that derived from a comparison of the new and old methods. He had heard the opinion of the leading German pathologists, and had himself become familiar with the benefits of the antiseptic method on the continent, some of the first results of which had been brought before the German Surgical Conference in 1874, when it was pointed out by Professor Volkmann that the question whether the germ theory was true or false ought to have no influence on the subject of antiseptic treatment, which was essentially a matter for experiment. Now, was it or was it not the case that a wounded surface would heal without the intervention of suppuration under the antiseptic method ? Dr. Volkmann who had kept himself uninfected by the prevailing craze of bacteria, said that it would do so and based his answer on his clinical experience. He need not mention his results in detail, but would communicate the impressions he himself had received. No spot could be more favorable for the experiment than the town of Halle, where owing to the recent extraordinary rapid increase of the population, the hospital was far too small for its requirements, besides being one of the most detestable that could well be imagined. It was situated in the very midst of the old town, the wards were very low and opened directly into the latrines, and the beds were so closely crowded that there was scarcely room to pass between them. In short, the hospital at Halle presented an assemblage of all the circumstances as most likely to lead to the development of the worst traumatic affections. But the success obtained by Professor Volkmann was quite equal to the best results of London surgery, all the bad effects of his unfavorable surroundings being neutralized by carrying out conscientiously the Edinburgh method. From a scientific point of view, each of the successful trials which had been made of Lister's treatment during the last few years in the great hospitals of Europe might be regarded as a separate experiment, the whole series pointing to the same conclusion, that a serous surface might be exposed, and that living tissues might be incised, or even subjected to serious mechanical injury, without these parts becoming foci of inflammation, without any further reaction taking place than was necessary for the constitution of the reparative processes. London experience furnished us with examples which showed that similar skill, care, and accuracy, even when not carried out on the principles of occlusion, led to similar results. Considering the facts connected with Lister's treatment,—that, for instance, at Munich ; in the year 1854, hospital gangrene affected eighty-four per cent. of the traumatic cases, but had entirely ceased since the introduction of Lister's method, and that similar success had been obtained at Strasburg, Leipsic, and Innsbrück,—we need not be surprised to hear Lister's discovery spoken of as one of the greatest of modern times.

At present, however, the lecturer mentioned, we had simply to deal with a pathological theory. The germ theory said that the reason why a wound went wrong was that germs obtained admission to it from the atmosphere. The so-called antiseptic treatment only professed to be an application of Pasteur's experiments to a practical purpose. In both cases the same precautions were necessary, but in the laboratory experiments the criterion of success was the absence of organisms from the result. Were we, then, justified in applying the same test to the antiseptic treatment of a diseased surface ? On the germ hypothesis we should be so justified, but in reality the existence of organisms in the discharges was not the true criterion of the success of the antiseptic method, the primary question being not whether the germs were sterilised, but whether their results were prevented. Consequently, whatever our doubts might be, they ought not to interfere with our acceptance of the prophylactic value of the method. Two series of observations lately published in Germany showed that though in many instances the occlusion treatment might be successful in warding off infective processes and shutting out germs, there were others in which the patients remained fever free, pain free, and inflammation free after an operation, even though organisms might have existed in the discharges. The treatment here was successful because the organisms were under conditions hostile to their development, and were, therefore, harmless. The treatment of a wound, in short, was not an experiment on spontaneous generation, but one on the pathology of infection. It was a combat not with atmospheric germs, but with diseased infectivity. Were it otherwise, the entrance of one germ would be fatal, whereas traumatic surfaces were often exposed to germs without any infective results. In how small a percentage of cases would a simple incised wound fail to heal because the knife had happened to be covered with germs. Hundreds of operations were daily performed upon animals for purposes of convenience, and yet how often did it happen that the wounds so caused refuse to heal ? He would refer, again, to the operations of vaccination and subcutaneous injection, the very method of conducting which was contrived to expose external matter to an absorbent surface. Who, he would ask, had ever heard of infective processes being set up by the use of the subcutaneous syringe? Yet it could not be argued that the wounds were too insignificant, for it was often by the smallest wounds that infection entered. Hospital gangrene, it was well known, was more likely to infect punctures and scratches than larger wounds. He thus wished to show that the three chief principles underlying he success of the antiseptic method were deeper than the surface of the wound. The first principle related to the avoidance in the wound itself of all conditions favorable to the development of infectivity. Thus, all methods tending to prevent the accumulation of blood in wounds must be of great importance, for if blood accumulated in the wounds it would be withdrawn from the colytic influences of the living tissues, and so would be liable to undergo those changes which had been described. The second principle was the avoidance of infective contamination, the sources of which formed a seperate question. Wherever putrefaction had been going on for some time, there infective virus was being elaborated; consequently, ordinary filth was more or less virulent, and for that *primâ facie* reason cleanliness was especially necessary. In the practice of all surgeons that principle was so thoroughly recognized, that we might hope soon to speak of surgically pure instruments just as we do now of chemically pure substances. The third principle was also of the greatest value, namely, the use of disinfectants, especially of those of proved colytic value. Of course, the benefits derived from carbolic acid, for instance, were matters of daily experience, but it was possible that in the future some better results might be obtained with other substances.

The lecturer in passing on to deal with the intervention of vegetative processes in specific infection, said that in doing so he would have to bring under notice some processes very different from those which he had already considered. The first case to which he would allude was one which lay nearest to septicæmia. The septic poison was an exclusive product of bacterial development, a product incapable of passing through certain kinds of filters, but capable of passthrough other kinds. Pathologically, the poison did not act the part of a specific contagion, for a sufficient quantity of it must be introduced before the effects would manifest themselves, and these effects were directly proportionate to the quantity of poison introduced; there was, moreover, a tendency to recover from them. But every one knew that there were cases allied to septicæmia, in which the process was far more virulent. In these cases the quantity of poison required to produce the effects were measured in homœopathic doses, and the effects themselves were determined not by the quantity of poison introduced, but on the development of the processes in the organism to which it gave rise. The history of such cases was very simple. The gateway through which the poison was admitted was usually a prick or slight wound, and the primary effects might be very slight. But after some hours or days, inflammation of the lymphatics and diffused infiltration of the cellular tissue made their appearance; the process rapidly extended, inflammation of the pleura or peritoneum set in, and death, preceded by delirium and collapse, soon followed. These results were mainly due to an extraordinary development in the organism of a specific virus. We must clearly distinguish between these appalling cases and those of ordinary septicæmia. The lecturer had shown by experiments, that if the exudation from a case of simple peritonitis were injected in a fresh state into the peritoneum of a second animal, the inflammation set up by it assumed a more serious form than in the first animal. If again, the exudation from the most serious of the cases thus produced were injected into a third animal, the results were still more intense, and the process might be repeated until a poison was at length obtained which had the virulence of the specific virus above alluded to. Substitute natural for artificial selection. and we obtained a process which could only go on in living tissue, and which was associated with a definite series of structural and pathological changes. By thus having recourse to experiment. it might be shown that by a gradual selection we could rise from common traumatic infectivity to the intensified virulence of malignant septicæmia.

The lecturer now passed on to consider the case of certain specific contagious diseases. There were only four of such diseases in which we could assign a pathological meaning to the organisms found in the body. These were relapsing fever, diphtheria, small-pox and splenic fever. The lecturer would first draw attention to the results gained by Dr. Koch, in his researches into splenic fever, a disease of great rapidity, and strikingly resembling septicæmia, except in the most rapid cases, in which a febrile stage might be distinguished.

The post-mortem appearances had also some resemblance to those of septicæmia. There were capillary hemorrhages into the mucous membranes, the red blood corpuscles were disintegrated, and the blood did not coagulate after death. But on the other hand, the disease exhibited certain special features; there was an abundant discharge from the vessels of liquor sanguinis and corpuscles, and the spleen was intensely congested. With regard to the intimate pathology of the disease, the following points must be borne in mind: The blood taken from an animal suffering from the disease was known (1) to communicate the contagion in minimal quantities. (2) It always contained the minute organisms known as bacilli. (3) If filtered through porcelain, it lost its power of communicating the disease; and (4) it could not, as a rule, be kept more than a week without losing its virulence, though in a few cases the virulence persisted. The lecturer believed that the special organism of splenic fever could exist in two distinct states, one in which it was permanent and resisting, and one in which it was easily acted upon. It would also appear that the contagion of splenic fever must exist in the blood in two forms, in proof of which he would cite some experiments which had been made in Germany in October last. The disease was communicated to a rabbit with blood which had been kept for five years, by means of a scratch, as in vaccination; the blood of the rabbit having been previously examined, and found free from organisms. The disease developed within twenty-four hours of inoculation, and proved rapidly fatal. After death the spleen was found greatly enlarged, and the blood was crowded with the organisms in question, which was well known, were much larger than those found in ordinary septic liquids, and utterly motionless. A certain portion of the blood was now taken and placed under the microscope; some of the aqueous humor of the eye was added to it, and it was carefully watched. It was then found that within the next twenty-four hours the organisms lengthened, until the field was covered with a net-work of filaments, running in different directions. The protoplasm within each filament was now seen to collect into spores at certain distances from each other. The last change was the breaking up of the filaments, and the liberation of the spores. Dr. Koch had made out, first, that the difference between the two kinds of blood, above alluded to depended on the fact that the one kind contained spores, which retained their power of resisting putrefaction for comparatively long periods. And secondly, that the development of the organisms in the animal correspond to the development of the disease, the climax of which consisted of two parallel series of phenomena, viz.: pathological changes, and developmental or morphological changes. We had, in short, in splenic fever, distinct evidence that by a vegetative process a virus was produced, which destroyed life by multiplying with extraordinary activity in the blood and tissues of the living animal.

The lecturer then passed on to place before his hearers the facts which he possessed with regard to the other diseases of a similar kind, above mentioned. With reference to vaccinia and diphtheria, he said, we knew that they were associated with the presence of organisms, but we had no evidence of the pathogenic properties of these organisms. In both small-pox and diphtheria, the primary infection was followed by secondary lesions in other organs, and in both, the same organs were affected. These lesions were most remarkable, and consisted chiefly in endocarditis and in capillary embolisms in the liver, kidneys, and lungs. The valvular endocarditis of diphtheria, to which attention had been called by M. Legras, was the same affection as that which occurred in pyæmia, and, like it, had a doubly infective character. It was in itself the consequence of an infection, and it was the focus from which other organs were infected—the source of the embolisms which occurred in the kidneys and other organs. The endocarditis was met with in two stages. In the earlier stage, the edges of the valves were beset by a little chain of miliary elevations; in the latter stage, the process was more of an ulcerative character. The point to bring under notice here was, that diphtheria was the only disease in which the affection of the cardiac valves was associated with the development of micrococci. But these micrococci did not in the least resemble the infective organisms of splenic fever, for they showed no tendency to multiply in the blood, and they were associated with local not general processes, their relation to the latter being still undecided. The above investigations showed that though ordinary bacteria could not live in the blood, there were organisms which could; and that from masses of such organisms in the tissues very little irritation was produced, and that little was confined to the parts immediately surrounding them. Their effect was not inflammation but necrosis, in the form of a dead mass enclosed and surrounded by a zone of altered tissue. There was no suppuration at the time, though subsequently the mass might become the seat of inflammation and of abscess.

In conclusion, the lecturer said, that the view which appeared to him most probably correct was, that in all the acute affections which he had mentioned, the organisms were specifically the same, but that they reciprocally modified, and were modified by the soil in which they grew. Whether they could convey the contagion must for the present, be left an open question.—*London Medical Examiner.*

* * *

THE BASES OF THE ANTISEPTIC SYSTEM.

The attention of the profession has been forcibly called of late to the doctrine and practice of Antiseptic Surgery. The address of Dr. Roberts before the British Medical Association, in August, presented the subject from the point of view of the practitioner of medicine, whilst the oration of Dr. Allen Thomson before the British Association, delivered shortly afterwards, dealt with the doctrine as it commends itself to the man of science. Still, more recently, Professor Lister has added to the experimental data which support the theory ; and the presence of this apostle of the antiseptic doctrine in the midst of the surgeons of the metropolis will, no doubt, give zest to the interest which the subject so generally inspires. It appears to us that the present is no inopportune moment for a retrospective glance at the bases, theoretical and practical, on which the system is founded, for it is more than probable that errors exist, not only as to its scientific correlations, but also as to the steps by which it was established and perfected.

There is no doubt that the great theoretical basis of the Antiseptic System was laid by Pasteur in 1860. Disregarding all anterior observations, which savored more or less of hypothesis, we may look upon the experimental investigations of the French chemist as establishing, with the nearest approach to scientific precision, the germ theory of fermentation. By such is meant the doctrine that fermentive decompositions are brought about, not by any occult property of changeable organic matter, but by the direct agency of living organisms. It is needless to say that this doctrine has been very strongly contested and severely criticised ever since. M. Pouchet at first, with a very strong following, opposed to it the theory of Heterogeny, the teaching of which was that the organisms which attended fermentations were spontaneously developed in putrescible fluids, and were not disposing agents. Subsequent observers have announced their adherence to this latter doctrine with various modifications, but it is scarcely too much to say that their followers are a vanishing number; for rigid scientific investigation has tended more and more to establish the points—first, that fermentive and putrefactive decompositions are closely correlated with the presence of minute living organisms; and secondly, that the absence of such living particles from the most highly decomposable fluids is strictly in relation with the efficiency of the means employed to exclude them. It is needless, however, to dwell on these points, for the germ-theory of fermentation and putrefaction is a necessary postulate to the antiseptic system. If that be not conceded, the system can have no scientific existence.

We read in Professor Allen Thomson's address that Professor Lister "had the merit of being the first to apply the germ-theory of putrefaction to explain the formation of putrid matters in the living body; and he has founded on this theory the now well-known antiseptic treatment of wounds, the importance of which it would be difficult to over-estimate." With every disposition, however, to accord to Professor Lister the distinction of having elaborated and perfected the method, we cannot conclude from a review of the history of the subject that he initiated it.

Let us turn to what we may term the practical basis of the antiseptic system in surgery. We may define this as the method whereby putrefactive decomposition on the surface of wounds of the tissues is prevented, and thus a great following of evils and dangers abrogated. The disinfection of wounds is no novel proceeding. In 1859, M. Démeaux employed a powder consisting of a mixture of tar and plaster-of-Paris (a compound which had been patented the year previous) for disinfecting wounded surfaces. In the same year M. M. Lemaire and Lebœuf used an emulsion of tar, prepared by means of saponine, for the like purposes. This saponine was extracted from the bark of *Quillaya saponaria*, and was found to have the property of suspending in a very perfect manner the insoluble tar in the form of a saponaceous emulsion. Velpeau reported against it, but, nevertheless, its use gained ground, and in 1862 the Administration of Civil Hospitals in Paris authorized its employment in all the establishments. It may be urged, however, that it was employed just as hosts of other lotions and applications had been used previously—to keep wounds "sweet," and with no special reference to the doctrines of putrefaction, or the question of the advent of septic germs; but this could not be said in 1860, for in the same year that Pasteur communicated his thesis to the Academy of Sciences, Lemaire published a pamphlet ("Du Coaltar Saponiné"), in which he narrated eighty observations made on the human subject and on animals, and in which he distinctly defined the application of the coal-tar emulsion to be (1) the prevention of putrefaction by direct action upon the septic germs, and (2) the arrest of the production of pus. Lemaire showed that the active agent in the tar was carbolic acid, and in 1863 he published his work entitled, "De l'Acide Phénique: de son Action sur les Végétaux, les Animaux, les Ferments, les Vénins, les Virus, les Miasmes; et de ses Applications à l'Industrie à l'Hygiéne, aux Sciences Anatomiques, et à la Thérapeutique." A second edition was published in 1865. In this work it is not too much to say that the antiseptic method in surgery was distinctly inculcated. The antiseptic treatment of wounds, comminuted fractures, burns, and necroses, is fully described. After having cited a case of compound comminuted fracture of the bones of four fingers, successfully treated, Lemaire adds—"This observation appears to me to offer an important teaching as regards surgery. In fractures with crushing, amputation is recommended. Here we have seen that, in spite of cold water dressing, counselled in like cases, for twenty-four hours the suffering kept increasing. It is almost certain that, if I had contented myself with this treatment suppuration would have been established, and amputation have become inevitable. Coal-tar emulsion being employed, the pain is at once relieved, and after twenty-four hours rendered null, cicatrisation of bones and soft parts is effected, and everything preserved. This good result obtained in the case of four bones not only evidences the remarkable properties of coal-tar, but appears to me to indicate the employment of this method in cases of fractures of the limbs with crushing, before having recourse to operation." Lemaire is also explicit as to the efficacy of antiseptics in controlling suppuration. He asserts that he can arrest and reproduce at will the formation of pus, just as he can arrest and reproduce fermentation and germination ; and he adds, "If my theory be true, we ought to be able to prevent the formation of pus by the use of emulsion of tar before the tissues are involved in inflammation."

Here, then, we have both *ratio* and *modus* of the antiseptic system. We have yet to consider, however, the precise relation supposed to subsist between suppuration on the one hand, and putrefaction, fermentation, or the access of germs on the other. On this point, Lemaire expressed very decided views, though most of us will probably think that he past far beyond the just limits of scientific inference. He considered that the formation of pus was directly due to the advent of germ-laden air, that the globules of pus were comparable to those of yeast, and that they had an analogous function and an identical origin.

Whatever view we may adopt as to the origin of pus, we must agree that it is no material which is, by origin and development, foreign to the organism ; it is the degraded protoplasm of the organism itself. The pus-cell, however, though possessed of active vitality, does not minister to the nutritive needs of the organism in which it is developed, but, by multiplying and augmenting, acts as a foreign body, and, pressing on the surrounding tissues like a mechanical agent, causes progressive necrosis. Pus-cells indicate, according to Professor Lister, "the extreme of excess of quantity and impairment of quality in the product of abnormally excited nutrition." We have abundant evidence that the excitation due to putrefactive decomposition is a most potent and fatal cause of pus-formation, but we cannot hold that it is the *sole* exciting cause. We know that pus will form as a consequence of direct violence, and in situations where the advent of germ-laden air is in the highest degree improbable. We know, moreover, that the very agents which in dilution prevent pus-formation, when too strong, can induce it. It seems, therefore, only reasonable to conclude that putrefaction, though probably the chief, is not the only exciting cause of suppuration.

History then teaches us that the authors of the Antiseptic System were Pasteur and Lemaire, who formulated its principles in 1860.

It was not until 1867 that Professor Lister made public his method founded on these principles, but it will be agreed on all hands that he has done a most valuable work in elaborating with all the earnestness of a truly scientific observer, both the theory and practice of antiseptic surgery.—*Medical Times and Gazette, Jan. 5th.*

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, January 1st, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—The Marshall President having yielded to the demands of the nation, peace and confidence have been restored, and things are moving smoothly again throughout France. It is, therefore, to be presumed that the medical men of the country will eschew their poliltical proclivities and return to the pursuit of science and the curing of diseases. Although, the tendencies of medicine elsewhere are conservative, here they are essentially radical. The number of physicians in the new Chamber is very large, while the moderates can count but two votes among them.

The latest excitement in medical circles is an *autopsy club,* which holds its regular meetings at one of the principal restaurants, where good dinners are discussed, and its irregular re-unions at the houses of its dead members in order to study pathology and anatomy as they are revealed in the mortal remains of their former comrades. Each member on the evening of his initiation signs a legal document by which his body after death becomes the property of the surviving "fellows," with the understanding that it is to be thoroughly dissected, and used in any way that the interest of medical science may suggest. Some very prominent professional men are said to be connected with this movement, and the whole thing is *bona fide* and serious to the last degree. The inspiration to this novel organization is to be found in the fact that the popular prejudice against autopsies has surrounded them with such a host of perplexing legal formalities, as almost to preclude the possibility of effecting them at all. A special *authorization* has to be obtained in every instance, which always involves much circumlocution, while the consent of all the relatives within a certain range of connection has to be secured before a single step can be taken in the matter. In the hospitals, of course, a very different state of things prevails, and but few difficulties present themselves in the way of pathological research and anatomical study.

The last meeting of the Academy of Medicine was chiefly devoted to elections. M. Panas, the distinguished surgeon of Lariboisière, was chosen to replace the lamented Dolbeau, by an imposing majority. Professor Richet, who is the best teacher of surgery in France at the present moment, was called to the Vice-Presidency by 72 votes out of 75 ballots. M. Henri Roger, was, by acclamation, continued in the office of Secretary, which is one of the most important and honorable known to the profession. The other officers held over, and will discharge their respective functions during the coming year.

In order that you may form some idea of the diseases prevailing here at present, and of the condition of the public health, I beg leave to present the last "Bulletin de Mortalité," published by Dr. Worms, the physician to the Prefecture of the Police. "Paris, population, according to the census of the year 1876: 1,988,806 inhabitants. During the last week, there have been reported 968 deaths—that is to say, 25.3 per 1,000 of inhabitants—as follows: typhoid fever, 19; measles, 23; scarlet fever, 1; small-pox, 0; diphtheria, 28; brohchitis, 43; pneumonia, 66; infantile diarrhœa, 0; cholera, 0; dysentery, 1: puerperal affections, 5; erysipelas, 6; other acute affections, 235; chronic diseases, 434—of which 154 were caused by phthisis; surgical diseases, 49; accidental causes, 17. Total number of deaths, 968. Although the indefiniteness of this report is surprising in view of the advanced state of medical science in this great metropolis, it nevertheless, shows that at this season of the year, the death-rate from pulmonary disease is unusually high—a circumstance which should be duly considered by those who imagine that only health and happiness await them on this side of the water. The large number of deaths from rubeola, is to be accounted for, by the fact that a great number of physicians believe, that, the surest method of treating the disease is to keep the apartment at a temperature of 70°, to cover the patient with innumerable blankets, and to administer only hot drinks, *ad infinitum*. Under this depressing treatment, the robust may not be seriously damaged, but the weak, though possibly cured of the disease, are left in so profound a state of prostration as to prevent the possibility of recuperation.

Two very distinguished medical men have recently died in France, viz: Gintrac and Barth. The *former* long held a commanding position in the Medical School of Bordeaux, and greatly distinguished himself by his numerous works on medical subjects—especially that, published in 1853, entitled "Cours Théorique Clinique de Pathologie interne et de Thérapie Medicale." He was also an officer of the Legion of Honor, associate member of the Academy of Medicine, and correspondent of the Institute of France. These distinguished honors were all won by a life of labor and devotion, and they stamp him as one of the leading medical men of his day and generation. The *latter* has been so intimately associated with the advancement of medical science in France as to have acquired a world-wide reputation. When the Academy by an almost unanimous vote nominated M. Barth, in 1854, to a position in the section of pathological anatomy, it recognized in him, not only a pathologist of the most profound erudition, but a clinician of the greatest skill, and it gladly added its crown of laurels to those which he had so brilliantly won in other fields of science. Each *concours* was, in fact, the occasion of a still more imposing triumph; for in all of them he secured the highest position, and was much commended by his judges. This superiority was due alike, to the qualities of his mind and of his character—was won by his great intelligence, the zeal and persistence of his labors, the singular devotion to duty which always inspired him, the kindness and compassion which he ever displayed for his patients, and the loyalty to his friends, and respect for his masters, of which his active life was an exemplification. Among his numerous scientific works, those on the "Obliteration of the Aorta," "Ruptures of the Heart," the "Dilatation of the Bronchi," are, perhaps, the most excellent, and have served to give him the greatest reputation. As a teacher, he had no superior, as was attested by the crowds of anxious and enthused students who followed him; while his skill as a diagnostician was established by the records of thousands of the most rigorous *post-mortem* examinations. As a member of the Academy he was laborious, exact, impartial and thorough. As its President, he distinguished himself by the courtesy and firmness, with which he directed its proceedings, and by the learning and research which he brought to bear upon all scientific discussions. In a word, he was a great physician and a truly good man; and he will long be mourned and honored in France. The record of his life is illustrated by the highest honors known to his countrymen, for he was an officer of the Legion of Honor, President of the Academy, perpetual President of the Medical Association of the Seine, honorary President of the Clinical Society of Paris, and the trusted friend of the most illustrious of his compatriots in science, letters, art, politics and religion.

Having attended M. Thiers in his last illness, he was much affected by his death, and sought temporary repose by a short trip to Italy. Unfortunately for himself and humanity, he contracted a malarial fever in Rome, and died in a short time from the effects of it.

The Academy of Sciences has just received two announcements which have created much interest among its members. M. Raoul Pictet telegraphs from Geneva that he has succeeded in liquefying oxygen by a pressure of 320 atmospheres and 140° Centigrade. M. Cailletet also reports from Chatillon-Sur-Seine, that he has not only had the same success with oxygen, but that he has succeeded in liquefying oxide of carbon as well. This leaves only two gasses still resisting liquefaction, viz: hydrogen and nitrogen, and gives a new impetus to chemical work.

Dr. Cazin has just reported to the Academy of Surgery a very interesting and successful operation for occlusion of the intestine, performed upon a young man 28 years of age.

Without going into details, I will simply state the conclusions at which he has arrived in regard to gastrotomy, as they are of great practical value, and have a very distinguished endorsement.

1. Gastrotomy is an operation which is applicable to certain cases of internal strangulation—those which are produced by bands and twists, and those which result from invagination.

2. It is not necessary to know exactly the seat of the stricture before interfering.

3. Delay in operating always diminishes the chances of success.

4. If doubt exists as to the precise point of the strangulation, the incision should be made in the median line and extended far enough to enable the surgeon to discover it. If the seat is known, the incision should be made directly over it, and to as limited an extent as possible.

5. In seeking for the stricture, it is necessary to bear in mind all the various causes by which such an effect can be produced, and to follow the method of Parisè, which greatly simplifies the procedure.

6. During the operation the greatest care should be taken at each step as in ovariotomy, and the antiseptic method of Lister must be employed.

7. After the operation, enjoin the most absolute repose, general and local,—permitting no movement whatever, and employing neither injections nor purgatives.

.The most important point, however, in a correct diagnosis—is to determine whether or not intestinal obstruction really exists. Only recently, I saw one of the most distinguished practitioners in France mistake a case of hepatic abscess, in which there was obstinate constipation, abdominal enlargement, and the constant vomiting of matters having a most disgusting smell—a mixture of vitiated bile and pus—for one of intestinal obstruction, and prescribed accordingly. As my residence in the East had given me an unusual experience with hepatic diseases, I ventured to join issue with him as to the correctness of the diagnosis ; and I had the satisfaction of having my convictions verified by a subsequent *post-mortem* examination, for the abscess was found, while the intestinal canal was shown to be unobstructed throughout its entire length. The *disgusting smell* of what my learned friend regarded as stercoraceous matter, taken in connection with other prominent symptoms, certainly pointed very strongly to the existence of internal strangulation ; but, having encountered the same odor before in a case of hepatic abscess, I recognized its peculiarities at once, and based my opinion upon them. Although constipation was also present, some movements had been obtained before the patient was seen by the party referred to, and the question presented itself as whether or not the discharges were from the entire track of the intestine or from that portion below the supposed point of obstruction. This is a question which frequently arises in practice, and it is usually one very difficult of solution. In the case just referred to, I was convinced that the discharges were from the entire track of the intestinal canal for the following reasons, viz: they were copious and liquid; they evidently contained bile; they had the same odor as the matters vomited from the stomach; and the patient himself was conscious of certain movements in various parts of the canal, with a general tendency downwards, and felt assured that his bowels had really been regularly moved—had finally responded to the repeated and heroic efforts which had been made to relieve them. The autopsy showed conclusively that these grounds were well taken, for neither accumulation nor obstruction of any kind was revealed by it.

Hypodermic medication is attracting much attention, at present, in Europe. Syphilis, as you know from the testimony of Lewin and Sigmond, is very successfully treated by the injection under the skin of minute doses of corrosive sublimate. Dèclat professes to cure a great variety of diseases—especially typhoid fever and erysipelas—by the subcutaneous injection of carbolic acid in solution. Hyosciamin when introduced in the same manner gives surprising results in mania, senile dementia and general paralysis. So, likewise, pilocarpine develops diaphoresis; atropia limits cutaneous transpiration; eserin restrains tetanic contraction; morphia relieves pain or spasm and induces sleep: quinine arrests malarial fever and reduces pyrexia; croton-chloral aborts hemicrania; apomorphia induces emesis; and ether stimulates to reaction and antagonizes the depression of collapse; while milk, liquid fats, saccharine solutions, the yolk of eggs and peptone, supply sufficient nutrition for the necessities of the system in certain morbid conditions. It is, however, to the hypodermic administration of ergot that the attention of the profession is specially directed at this moment. Evidence is daily accumulating in support of its potency in the treatment of purpura, capillary hæmorrhage, cerebral hyperæmia and non-malignant tumors generally. Following the lead of Hildebrandt the English and French physicians have employed it with unmistakable success in the treatment of fibroid growths within the womb. Although it not infrequently happens that abscesses are produced at the points of puncture, it undoubtedly causes the expulsion or absorption of intra-mural tumors and thereby restores the normal functions of the organ. By using either the fluid extract of ergot in a solution of Bonjean's ergotine, and taking care to introduce the needle deeply into the tissues, the tendency to local inflammation is very materially lessened.

In a recent discussion in the Academy of Medicine, M. Delore stated that it is his custom to introduce this agent into the tissue of the womb itself. By means of a speculum he exposes the organ, and directly punctures it—with the result of inducing an action much more prompt and decided in its character than when the medicine is taken into the stomach or introduced beneath the skin according to him, the hemorrhage is immediately resisted, the patient is permanently relieved and no ulterior evils ensue. M. Duply, although persuaded that the benefits ascribed to the subcutaneous employment of ergot, had been somewhat exaggerated, had seen patients greatly benefitted by it. M. Panas thought that by using a solution of Bonjean's ergotine less risk of local irritation was encountered, and more certain results were secured. He suggested, however, that an abatement of pain might be due to the effect *rather of the water* than of the *drug* injected. Professor Sée had repeatedly observed both an arrest of hemorrhage and an abatement of pain after subcutaneous injections of ergot, and felt sure that the *water* introduced was not the curative agent. Several other medical men expressed similar views and it seemed to be the general verdict that this mode of medication is a valuable one and worthy the confidence of the profession.

Vidal, at the Hospital, St. Louis, goes a step farther and treats uterine prolapsus in the same manner and with equally happy results. It is also stated that Tarnowsky, of St. Petersburg, who has had unusual success in the management of uterine flexions, relies to a great extent upon this mode of treatment as an important auxiliary to the operative measures which he employs.

I have recently had occasion to introduce ergot under the skin in two instances, and both the most gratifying effects. In the *one* case, I succeeded in promptly arresting an alarming hemorrhage caused by a fibroid, and in the *other*, in securing the immediate contraction of the womb, which, after the final effort in the expulsion of a placenta, had suddenly dilated to its fullest capacity, and presented egress to the most copious stream of blood that I had ever seen rush from a woman.

In view of all of these facts, the scepticism which has prevailed with so many in regard to the therapeutical potency of ergot, must give place to an active faith in its virtues; while the conclusion is irresistable that the proper way to employ it is subcutaneously.

In connection with the subject of hypodermic medication, I must add, that in the last number of the "Bulletin Général de Thérepeutique Médicale and Surgicale," Dr. Luton, of Reims, publishes an exceedingly interesting article in which he gives numerous instances of the radical cure of congenital inguinal hernia, by the subcutaneous injections of salt water. He uses a saturated solution, thoroughly filtered, and introduces it in quantities of ten drops at various points along the course of the inguinal canal—with the result of inducing a sufficient amount of adhesive inflammation to prevent the further escape of the gut from the abdominal cavity.

As I have already made my letter so much longer than I had intended, I feel constrained to defer the details furnished by M. Luton, to another occasion.

Very truly and respectfully yours,
EDWARD WARREN, (Bey) M. D., C. M.

OUR NEW YORK LETTER.

New York, January 18th, 1878.

There has been, within the year, an additional handsome structure put up upon the grounds of the Woman's Hospital, in which the patients are now accommodated. Some very serious defects in the drains of the old building necessitated its evacuation. In erecting this new one, the governors asked the advice of the medical staff, and then followed their own notions, dividing up the floors into small rooms, in spite of the assurance that better average results are obtained in large wards. And it is believed that the many stud partitions will eventually become reservoirs of foul air, to influence unfavorably the statistics of the hospital. All is now beautiful and wondrously clean.

A visitor, during Dr. Emmet's service, cannot fail to note much that is interesting. The clinics are delivered in a clear and unaffected manner, as if the speaker had no thought of self, but only of his subject.

In removing the silver sutures from an os uteri, that had been operated on for a laceration, the patient was placed semi-prone, Bozeman's speculum then showing perfect union, with as normal a looking os and neck as one usually sees. Your readers are indebted to Dr. Graham, of Charlotte, for his lucid exposition, in your last issue, of this great device of Dr. Emmet.

A case which has been very long under observation served to show some of the terrible results of ignorant midwifery. There had been sloughing of a great portion of the vagina, perinæum and contiguous parts, from neglect to terminate by instrumental aid a tedious parturition.

In the cicatrization which followed, an enormous cavity was left, the uterus retroverted, and the anterior vaginal wall so retracted as to cause *an enormous dilatation of the urethra* through which the everted bladder and a knuckle of intestine protruded.

The surgical relief was of the most difficult and novel character, and illustrated the fertile genius of the operator. A broad flap was dissected up from the posterior vaginal wall, brought forward and up to the anterior wall, where it united. The vagina was, of course, converted into a shallow *cul de sac*, and the menstrual flow now takes place from behind, through a small opening. The case is not yet relieved to its utmost susceptibility, and additional surgery is in reserve, looking chiefly to rectifying the malposition of the urethra, now vertical and like a "gimlet hole," with no retaining power. The Doctor used this case to point, moral : here was a young woman whose education had been pushed in her developing years to a high degree, to the detriment of her generative functions, so that at the first labor her "bottom literally dropped out," the uterus had not the power to perform its duty. "It is impossible to develop the brain and uterus simultaneously," if women will have the "higher education," (as at Vassar and Wellesley) it should not be sought at a growing age, but ought to be deferred to about the 25th year.

Another case exhibiting the great resources of gynæcology was one in which an enormous abscess, beginning in the left broad ligament, and descending along the rectum, destroyed the adjacent parts, labium, posterior vaginal wall, perinæum part of *sphincter ani* and left many sinuses, leading ultimately to great condensation of tissue, the structures about the left labium being hard and of little vitality. Many operations were required, the galvano-cautery being, in one instance, used in treating a sinus, but its effect was not favorable, and it is now condemned by Dr. E., almost *in toto*. The operation witnessed by your correspondent, was of the same nature as for closing a ruptured perinæum. The parts were freely denuded by scissors and tenaculum, to form a perinæal body, well up into the recto-vaginal septum. Deep silver sutures were passed through the tissues from one side to the other (not appearing at any point of the denuded part, but encircling the whole) and made a nice coaptation. The wires were twisted in the order in which they were inserted (from behind forward), and their ends left about two inches long, projecting from the wound, and a half inch piece of india rubber tubing slipped over their ends which held them together, and which was itself closely secured by bending the end of one suture over it, the others being cut off close to the tube. In this position they are out of the way, large enough to manage easily, and do not irritate the wound as they often do when cut off close. If cut short they not infrequently become lost to sight when swelling ensues, and must be sought for. The quill, or canula suture is abandoned, and, of course, no superficial sutures are requisite when the deep wires are brought across and twisted. Points to be observed are to guard against dragging pubic or labial hairs in with the suture, as they almost invariably cause abscess, as does also the use of needles which make a track larger than the suture will fill. In response to enquiries made in the interest of your readers, the Dr. said that in cases of *ruptured perinæum ought to be sutured immediately after labor*, as nothing is then necessary but to introduce the wires. The uterus, thus receives additional support, and, aided by the infant's nursing, more readily undergoes involution. If interference is delayed twenty-four hours, the wound requires to be re-freshened in order to ensure union, but then ordinarily it had better be postponed two or three months. The vagina is washed out several times a day with weak solutions of carbolic acid, but the knees should not be separated for this, or for drawing the urine. These are done by flexing the legs upon the thighs, and the thighs well upon the pelvis, thus completely exposing the parts. When the sphincter is torn through, great care should be taken to bring together the ends of the *inner circle* of fibres, which not being restrained by adjacent structures, as is this outer part of the circle, retracts, and the ends will certainly fail to reunite unless one suture is introduced very deep, nearly behind the gut, so as to include them. If this is not properly done the sphincter will have no retaining power. Formerly it was a frequent source of trouble, and Dr. Sims thinking the failure to secure a good sphincter was due to flatus, inserted a tube into the anus, but Dr. Emmet has shown this to be unnecessary if proper regard is had to securing a union of the inner (smaller) circle of fibres.

It is very striking to note the versatility and power of the daily metropolitan press. There is no subject in the range of human knowledge, that it does not boldly grapple with, laying down dicta, which if they not have always the merit of being truly scientific, are often, at least, original and of much force. The daily *Sun* is, for instance, a marvel in journalism, and in reading it, one would think that its editor were an encyclopedia of knowledge, as has been said of Herbert Spencer. No line in any issue fails to show the master's hand, every paragraph being pointed with care ; and in dealing with sociological and medical subjects, which more particularly interest us, it must be acknowledged that if it, at times, falls short of supplying something new, it often more than compensates in pointing to sources of information not previously known, even to readers of high culture. Its Sunday issue of eight pages costs but three cents, and returns more for the money than any publication I know of.

The press generally, has been of late, poaching upon medical ground, discussing among other things, and very demurely, as if the field were its own, Sir Thomas Watson's latest views on Rabies ; but they have failed to see that Sir Thomas' power of dealing with such topics has not survived as has his unapproachable style. Rabies remains where it has been for years, incurable, in spite of the two or three cures certified to by high authority.

An interesting agitation just now is the revival of the old enquiry into the music on insane brains, and experiments at Blackwell's Island, under the sanction of the Medical Superintendent, Dr. W. M. Strew, evince again, for the thousandth time, the marked power of rythm over the circulation and emotions of the poor creatures.

Generally the pulse was quickened and increased in frequency by from 20 to 30 beats, and the subjects subdued or excited, as the music was (as the Greeks say) of the Dorian or Phrygian order. I suppose the inquiry will become general, for I noted, a few weeks since, an advertisement in the daily papers by a private asylum, not remote from New York, for able bodied assistants having a knowledge of music. It will do good I am sure, not in curing lunacy, but in affording a source of obvious pleasure to the poor lunatics, and if continuously and systematically employed as an adjuvant in the treatment it may yield results, not reasonably to be expected from the intermitting experiments now made. But it must be remembered that it is no new thing, for we all pin our simple faith to David's harp chasing the devil out of Saul. We are loth, however, to believe that Penelope was faithful to Ulysses because Pheneus sung chaste songs to her ; and we are quite certain that it was upon Demadocus' watchful eye rather than upon his music that Agamemnon relied to keep Clytemnestra away from folly, for this dame soon fell when her guardian was slain. And yet mankind, medical and lay, has in all ages acknowledged the influence of music over mind and matter. Even so late an authority as Bonnet confirms Athenæu's, experience of the virtue of music in gout and sciatica, and Gibbon declares, in his last volume, that sound sways the human frame more than eloquence.

Do not our governments acknowledge this in providing, expensive martial music, and can we forget the power of the pibrochs on the canny Scots at Quebec, or the reward which Sir Eyre Coste returned to the bag-pipes at Poito Nuovo, as Sir Walter tells us in the "Fair Maid of Perth ?" Alas ! No where do I find evidence of a permanent change, wrought by music in human nature, and it will, I fear, prove but a passing pleasure, and not a cure to the poor lunatic—but let it be tried, if alone for that !

The State Medical Society met at Albany on the 15th, and adjourned after two days session. It was thought by some that a change in the time of meeting would produce some contesting delegations, but everything seems to have passed off smoothly. Dr. Eugene Beach read a paper on "Punctured Wounds of the Stomach," Dr. McL. Hamilton, one on "Auditory Epilepsy," which also elicited remarks on the germane subject of auditory vertigo, from Dr. Roosa ; Dr. Squibb dwelt upon the importance of uniformity in medical observations. Dr. Weir read a paper on "Urinary Fistula ;" Dr. Stephen Smith one on "Antiseptic Surgery ;" and Dr. Chase one on "Lacerations as a factor in uterine diseases."

Dr. D. B. St. John Roosa was chosen President, a great but well merited compliment to one who has worked with singleness of purpose for high culture and tone in the profession, and the results of whose researches, though chiefly in the direction of his specialty, are felt in every branch of medicine. Dr. Manlius Smith, of Onandago, was elected Secretary. I regret that space does not permit me to give a synopsis of the various papers. They will, doubtless, be published, and if not laid before your readers will be reviewed as to their salient points, in future numbers of the JOURNAL, at any rate, I have thought it useful to mention them to indicate in what direction the current of thought is flowing in and about this medical centre.

In matters of hygiene the question of space, ventilation, heating, gymnastics and hours in schools is upmost in every discussion, and there can be nothing more important for the State Board of Health to consider.

At the last meeting of the "Connecticut River Valley Medical Association," Dr. George Spafford read a paper on the "Sanitary effects of House Plants." Physicians are often called upon for an opinion in reference to this, and they ought to be able to speak definitely. The objections urged against green houses and house plants, are, 1st, that they exclude light and air; 2d, that they produce a dampness of the atmosphere; 3d, that they exhale deleterious amounts of carbonic acid.

The first is practically answered by the fact that where plants are kept, the sun and air is usually more freely admitted than when the windows are not used but remain curtained; and Professor Kedzie, of Michigan, has analyzed the air of a green house in which 6,000 plants were growing, and showed that owing to the vast quantity of ozone exhaled the atmosphere inside was no richer in carbonic acid than it was without, but actually less so by 50 per cent. during the night. It may safely, therefore, be concluded that house plants, even in a bed room, are not pernicious, but may be positively beneficial in giving off ozone, as do so abundantly the sweet narcissus, hyacinth, heliotrope and mignonette.

We have had a conspicuous instance in this State of the tenacity with which political parties insist upon the fruits of their victory. The Governor is of our political faith, and a majority of the Legislature of the opposite.

Dr. Austin Flint, Jr., was nominated as quarantine officer to fill the vacancy caused by the expiration of Dr. Vanderpool's term. Against Dr. F., nothing could be said; he is a gentleman of the highest culture, whose reputation is world-wide, of great industry and unusual capacity; he has never been a politician, but is not of the Republican household which controls the Legislature, therefore, they would have none of him, and the Governor is constrained to withdraw his name to avoid a rejection. DeR.

EDITORIAL.

ANESTHETICS.

The investigation into the relative merits of ether and chloroform still continues. The most rapid and easy administration of the latter maintains it as the favorite with surgeons who are not affected by the chloroform panic, such as exists in New York, where no one ventures (except, perhaps, in obstetrical cases) upon its use, for fear of not being sustained in the courts, in the event of a death under its influence. Quite a number of deaths have been reported of late under ether, so that the relative safety of the two agents are again, in a measure, *sub judice*.

The most recent special study of the contradictions for each are that in heart diseases, particularly dilitation and insufficiencies, chloroform is dangerous, and that in pulmonary affections, where bronchioles are choked up, and where there is a want of elasticity in the interlobular tissues, as in emphysema, atelectasis, &c., ether is apt to cause fatal results.

In these latter conditions it does not appear that chloroform is to be feared, owing, it is presumed, to the relatively smaller quantity of the vapor inhaled, not being sufficient to monopolize the respiratory spaces as does the large amount of ether required, and which from the lack of elasticity in the lung cannot be expelled.

These results are very interesting, and if they are true, (which we do not say they are) they weight the scale again in favor of chloroform, since it would be practical to secure safety by careful exclusion of the few unfavorable cases.

WEIGHT AND PULLEY EXTENSION, &c.

In reply to several letters of enquiry about the historical items given in our January number, we cite some additional authority for most of which we acknowledge our indebtedness to our learned friend, Dr. Henry A. Martin, of Boston, who kindly made the extracts for us.

Our researches did not extend beyond American surgical annals, for if they had, we would have described the origin of the principle since adopted by Daniell and others, in the "Couch and Jackstone of Hildanus."*

John Bell says about this device : * * * "But surgeons did at last fall upon a method which absolutely ensured the permanent extension ; for being wearied with this perpetual turning of screws to tighten the bands round the ankle, they at last most happily thought of putting a pulley to the foot of the bed, and hanging a good jack-stone to the heel. I have (in next page) drawn the bed, the sùr-cingle or horse-girth for the body, and the jack-stone of Hildanus for hanging to the heel, and according to my poor conception, the method of permanent extension was by this rendered so perfect, that Mr. Dessault could do nothing but disgrace himself by attempting any further improvement.

Every step we proceed in this history weakens the plea of Dessault to originality, and, what is more important, demonstrates the folly of all such attempts. If this be not an anticipation of Dessault, if this girth do not "prevent the body from gravitating toward the fractured limb, if this jack-stone do not prevent the limb being retracted towards the body," there must be something in the theory and practice of Mr. Dessault passing all comprehension."

Of the employment of adhesive strips by Gooch, already referred to, we present the following extract :

"To answer the same purpose, I have confined one end of a strong strip of sticking plaster, of a suitable length and breadth, under a circular piece of the same, about the middle of the side of the foot, carrying it over the heel, up the leg, and confining the other end above the calf with another circulàr plaster, first, gradually bring down the Muscul. Gastrocnem. as far as they will readily yield; giving the limb, at the same time, the position described in my treatise on wounds. On the like occasion, I have also fixed one strap by the circular about the foot, and another by that above the calf of the leg, passing the one through a slit in the other, and using them as the uniting bandages; but then two more circulars are requisite to confine the other ends of the longitudinal straps securely."

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*Principles of Surgery, by John Bell, Edinbrugh, 1801.

"Medical and Chirurgical Observations as an Appendix to a former Publication, by Benjamin Gooch, Surgeon. London, printed for G. Robinson, in Pater Noster Row and R. Beatniffe, in Norwich." No date, but about 1771.

Of the Pennsylvania doctors who employed adhesive plaster in traumatic surgery, mention will be found in *Sargent's Minor Surgery.**

The priority of invention is not so much a matter of glorification of names, as it is of interest to the student who is seeking to trace the steps by which surgery is achieving its daily success. The utilization of adhesive plaster by Dr. Crosby, entitles him to a high rank as a surgeon of fertile resource, and it has opened ways for new devices which, perhaps would have been impossible without it.

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CATALOGUE OF THE NATIONAL MEDICAL LIBRARY.

Public good sometimes grows out of public calamity, and a most remarkable instance of this is the great good which has been achieved by the Surgeon General's Department in creating a surgical museum of almost unequalled extent and value, and even a greater and better work in accumulating an immense medical library of "40,000 volumes properly so called, and about the same number of single pamphlets," all we may say, the outcome of the terrible conflict between the States. Taken together, surely we speak within bounds when we say that the money appropriated for the Medical Department, has yielded a better return to the nation than a like sum otherwise invested. That there has been a faithful and labored application to all the duties of this department is evinced by the immense amount of literary and scientific labor performed. The three huge volumes entitled "Medical and Surgical History of the War &c.," at once placed American surgery and medicine before the world as the equal of the older nations, and in a way which could never have been attained by the efforts of any body of medical men without the aid of the government.

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*p. 177-78 text and note. Blanchard & Lea, 1862.

The NATIONAL MEDICAL LIBRARY embraces an immense collection, ranking it among the largest in the world, and it is rapidly increasing. This Library is accessible to physicians who care to consult it, for six hours of the day, putting within the reach of medical authors and students, works which until its establishment could not be consulted except by a trip to Europe. But such a collection as it stands cannot be readily consulted. No amount of industry could make it available to the visiting physician except by a residence of some weeks or months in Washington. This difficulty has at last been nearly overcome by the industry of the learned Librarian Surgeon Billings, who has prepared the most complete catalogue yet compiled, a "Specimen Fasciculus" of which was published in 1876. Its method is all that could be desired. An inspection of this specimen will convince any one. The references are from the general to the more special heads, and are so arranged that under one head may be found what Surgeon Billings modestly calls an outline of bibliography, but in the numerous cases we have examined it, it seemed a marvel of minuteness. The references under the head ABORTION, for instance, occupies nearly thirteen columns quarto, of which five and a half columns refer to bound volumes, four columns to articles in periodicals, and the remainder is taken up with the jurisprudence of the subject. The type used is so varied, that catch-titles and names of authors are found with the least amount of labor. The manuscript is ready whenever the authority comes from Congress to print it. The request is now before Congress for an appropriation of $25,000 to commence the work, and it is hoped they will not grudge the sum asked, but forward it with all needed assistance. We are not speaking our opinions merely, but the doctors in all parts of the country unite in this, by no means unreasonable request. All this great work cannot be completed until this index has been printed, and put within the reach of the large number of American medical students.

REVIEWS AND BOOK NOTICES.

Report of the Board of Directors and Superintendent of the Insane Asylum of North Carolina; for the official year ending Nov. 30th, 1877.

Dr. E. Burke Haywood, President of the Board of Directors, in their behalf, calls attention to the condition of the asylum, dwelling especially upon the fact that by comparing six institutions of like character in the United States, the appropriation to our asylum is the smallest, viz: a per capita appropriation of only $226 62, and it is also the smallest appropriation ever made since the institution was founded. This pinching appropriation made it necessary, in the opinion of the Directors, to cut down the salaries twenty per cent. in addition, as we understand it, to lopping off the extra pay voted by the Board of Directors in 1871. Here is economy of the most unjust and unwise sort. A great commonwealth entrusting its insane, "many of whom have been distinguished in the colleges, schools, legislatures, and learned professsions," to skilled officers, agreeing to a certain amount of pay, and then on the score of economy reducing the appropriation to so small a sum that the asylum must go in debt, or else ask the amiable officers to take less than the sum agreed upon. It is a wonder these Solons had not thought of saving the money out of their own per *diem*—but they did not.

The Superintendent, Dr. Grissom, in his report says, "that during the past year we have been again blessed with the same comparative immunity from sickness and death, which the low per centage of mortality has exhibited for years past, in our history."

"The cures upon admissions have been 24 per cent., and including the much improved have been 40 per cent. The deaths upon number under treatment have been nearly 5 per cent."

"Of the admissions during the year, the cause of disease is reported to have been mental in 14 cases; physical in 27: unknown in 12."

"The form was mania in 35 cases; melancholia in 10, and dementia and imbecility in the other cases. The average duration before admission of those received, is represented to have been over two years."

Dr. Grissom very correctly calls attention to a matter which he has often reiterated, that "too often golden moments of early recognition and speedy cure are lost, before some outbreak forces the conviction of the dread reality upon the friends of the victim."

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The highest number under treatment at any one time was 287, the lowest 264, and the daily average 278.

Then follows an elaborate statement showing the material circumstances of those admitted during the year, of each case discharged "recovered," each case discharged "improved," each case discharged "unimproved," and of each case of "death."

The Superintendent also calls attention to the fact that the promised provision for the insane colored people has not been accomplished. This is much to be regretted, as the committee entrusted with this work have had ample time to give some shape to their designs. It is unjust to both races, that the negroes should not be provided for at once, thereby relieving the physician in charge, of a surplus of patients, and giving the remaining whites more breathing space. That "it is not safe to carry all your eggs in one basket" is as true of insane hospitals as of any other, and the Directors for the proposed asylum for the colored people would do well to terminate their pilgrimages from town to town and settle upon some definite scheme. Hot haste is reprehensible in such important matters, but with this, our new Board cannot be charged. It is but justice to Dr. Grissom and his valued assistant Dr. Fuller, and it would be a mercy to those poor unfortunates who are making every county poor house and jail hideous with their wailings, that the Board should either act, or stand aside for a new one that would not have to palaver so long.

Upon the whole, Dr. Grissom may congratulate himself that interference by the Legislature—a very mixed and very variable, and of late years a very inexperienced body, has not extended to more serious matters than limiting his means. Let it suffice that politics has carried some of the unfortunate inmates into the asylum, and let us pray that the ruthless hand of the politician may be kept off such sacred things.

Dr. Burke Haywood calls pathetically upon the Governor for aid. He says: "I appeal to Your Excellency, to use your influence with the next Legislature to make an appropriation for the Insane Poor of North Carolina, which will, at least, place them on an equality with those of other States as to a per capita allowance." We hope the Governor will have success in prevailing upon the Legislature to do what they are paid to do—their duty; and we furthermore suggest that each member of the incoming Legislature be furnished with the REPORT OF THE BOARD OF DIRECTORS AND SUPERINTENDENT and his attention especially called to it.

THE ACTION OF MEDICINE, by ISAAC OTT, A. M., M. D.; formerly Demonstrator of Experimental Physiology, University of Pennsylvania. With 22 illustrations, 8vo. pp. 168. Lindsay & Blakiston, 25 S. 6th Street, Philadelphia, Pa. Price $2 00.

We are indebted heretofore, for the most part, to German, French, and English sources for our knowledge of the physiological action of remedies, and we are pleased to see that such investigations in this country have a hopeful beginning. The work before us begins with a chapter on How to study the physiological action of remedies, giving directions as to the animals used, Feeding and preservation of animals, Fostering of Animals, Physiological Anatomy, Anæsthesia, Electrical Apparatus, Administration of Medicines, &c., the matter under these heads being sufficiently explicit for the guidance of the student in the physiological laboratory. It was to supply the lack of a hand-book on these subjects that the author began his work.

The second division of the volume is upon the action of medicines. 1st. On the Lower Animals, 2d. On Man in Health, 3d. Action in Disease. The number of medical substances treated in this way is quite limited, the largest space being given to new remedies and their alkaloids, and some of the old drugs that are again candidates for professsional favor. The manner of treatment can be better shown by a few extracts here and there.

ALCOHOL.

"*Action on Lower Animals.*—In the frog it causes restlessness, the respiration and heart-beat are accelerated, then slowed, the reflex excitability is lessened by an action on the nerve-centres, followed by heightened reflex excitability, and finally complete insensibility to external agents occurs with arrest of the heart; the muscles and nerves preserve their irritability. In warm-blooded animals it produces a state of excitement, with muscular prostration, abolition of intelligence, and immobility to external agents. In dogs after recovery, there is stupidity, and timidity, with incomplete paralysis of the posterior extremities, their arterial tension being at first elevated and then reduced. The vaso-motor centre during the reduction of pressure is inexcitable, which would lead to the conclusion that the elevation of arterial tension was due to stimulation; the heart-beat is increased, then decreased, and finally augmented." * * * * *

"*On Man.*—It excites first the cerebrum, then the cerebellum, then the medulla spinalis, finally the medulla oblongata, afterwards depressing their functions. During the stage of excitement the brain is hyperæmic, whilst in depression there is anæmia. It reduces the temperature, preceded at times by a slight rise. On persons used to the drug, it exerts hardly any effect on the heat of the body. When pure alcohol is ingested, it leaves no taint to the breath, which, if observed is due to fusel oil or the ethers. It is mainly oxidized in the body, forming finally carbonic acid and water, which products are excreted by the lungs. It may be excreted as alcohol by the skin and kidneys. It reduces the amount of urea in the renal excretion, and the carbonic acid given off by the lungs." * *

"*Action in Disease.*— * * * In fevers it acts by its stimulant action on the nerves and circulatory apparatus, with the reduction of temperature, and *serving* "*as a nutriment.*" This opinion agrees with the following statement of Forthergill in his hand-book of treatment. "If alcohol is oxidized in the body, then alcohol is a food or furnisher of force." * * * * *

In speaking of Chloral-Hydrate, Dr. Ott merely mentions that "Leibreich states that it is an antidote to strychnia," whereas we expected to see some more satisfactory array of experience. There are very many well attested cases of the success of chloral as an antidote to strychnia, and among others, cases reported to the North Carolina Medical Society by Drs. Porter, H. W. Faison, and Picot.

Under the head of *Tobacco* we had hoped to see verified or disproved some of the experiments made by Professor Schiff on *nicotin.* The results of some of his experiments seemed to confirm Moleschott's statement that frogs may live a long time without disturbance after ligature of the liver and all the hepatic vessels. Not a frog, the liver of which has been tied, dies when 1-30th of a drop of *nicotin* is injected into a noose of the intestine. If the liver has been tied, a frog dies after the injection of 1-80th of a drop into a lymphatic sac, while a healthy frog will survive such an injection, and not exhibit any very characteristic symptoms. Other lesions or ligatures do not diminish the tolerance of frogs for small doses of *nicotin.* If the liver of a rabbit or a large piece of one of a dog be triturated in a mortar, and four drops of *nicotin* rapidly mixed with it, the red juice pressed from this through a cloth, may be injected into the cellular tissue of a small dog without killing it or producing alarming symptoms. But if for the liver, the kidneys are substituted, violent poisoning is produced, which is not the case when the juice of the kidney, uncombined with nicotin is employed. In these experiments it appeared that "the liver destroyed the lethal properties of nicotin, and prevented convulsions, fibrillary contractions, tetanus, and the alarming symptoms in general."*

We had occasion to mention in our January number, Dr. Ott's studies on the poisonous action of the active principle of some of the Agaracini and its antagonism to atropia, and take pleasure in adding this additional information from the "Action of Medicines." "*Muscarin*" (the active principle of the fungus *Agaricus muscarius*, fly mushroom) "excites the chorda tympani, atropia paralyzes it; muscarin excites the cardio-inhibitory apparatus, atropia paralyzes it; muscarin contracts the pupil, atropia dilates it; muscarin increases intestinal peristalsis, atropia decreases it; muscarin decreases the urinary secretion, atropia restores it."

For the benefit of those of our readers who have not formed the habit of carrying *apomorphia* with them in their pocket-case we will quote lastly, that "apomorphia is an emetic, even in asphyxia, when introduced subcutaneously."

It is not very likely that the medical men of to-day will be willing to neglect the opinions of "paper physiologists," as our author calls them, by way of distinction from the laboratory physiologists, until the methods of the latter have arrived at more precision. It is not so easy to forget the very great discrepancy between the current clinical opinion of the action of mercury and that arrived at by the Edinburgh Committee; for although the report of the latter seemed to shock the medical world, its recovery has been very complete, and the clinical observers still have the best of it. We like Dr. Ott's book though, and hope he is just paving the way for more extensive researches in the physiological action of medicines.

FERNS OF NORTH AMERICA, by Professor DANIEL C. EATON, Yale College, Part II; S. E. Cassino, Salem, Mass.

Botanical students will find this work a valuable assistant in determining species and bringing together in one volume all the ferns known in North America; and amateurs will find in it a guide to the collection and naming of their ferns unequalled by anything known in this country before. The three chromo-lithographic illustrations are gems of the American press and the work is worth having for the art's sake, if not for the love of the study of ferns. Now that fern-hunting is such a passion, the exhaustion of a large edition of this work may be looked for.

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*Medical Times and Gazette, June 9th, 1877.

MEDICAL ANNOTATIONS.

ESMARCH'S METHOD IN PAINFUL ULCERATIONS, &C., AND DR. HENRY A. MARTIN'S BANDAGE.

Dr. Bernhard Cohn, of Steiglitz, relates two cases in which induction of artificial anæmia by the bandage was followed with great relief; and begins the details of a third case, in which a practical cure resulted after all other modes had been exhausted. After a few applications of the bandage of from fifteen to sixty minutes, the improvement was so great that the limb of a patient who had been suffering with white-swelling, could be moved in all directions or handled without pain, enabling the patient to bring the entire sole of his foot to the ground in walking. Dr. Cohn declares that in practice the idea that the increase of blood in capillaries, which follows the removal of the bandage will entirely undo the effect of previous anæmia, is not sustained. He considers that the bandage acts mainly by relieving the congestion of the inflamed part, and perhaps, by improving the condition of diffusion between the tissues and the blood-vessels. "How often can and ought the constriction to be renewed?" and "Is it better to use single *long* compression, or frequent short ones?" require further experience to answer satisfactorily. (Berlin. Klin. Wochenschrift.)

These latter questions are satisfactorily answered by Dr. Henry A. Martin, of Boston, in an article to the *Chicago Medical Journal and Examiner* entitled, "*Surgical uses of the Strong Elastic Bandage other than Hæmostatic.*"

For over twenty-five years he has made use of a strong bandage of India rubber, for the treatment and cure of all ulcers of the lower extremity of a non-specific character, coming at all within the category of curable, and as a most efficient aid and palliation of those of a specific nature, and those incapable of a perfect cure by any method of treatment.

Dr. Martin's bandage very much resembles Esmarch's and was in use by him many years before the appliance of the latter distinguished gentleman was made known. Dr. M. had a decided theoretical conviction that the deep arterial circulation could not be controlled in this way, and therefore disclaims being the originator of what is known as Esmarch's bandage.

The bandage recommended by Dr. Martin is made of the best Para rubber, and he has saved those who desire to employ this treatment very much trouble, by having the strips made and cut at the factory, in the way his experience shows to be best.*

The bandages, (10½ feet long, 3 inches wide), are to be applied by taking one turn just above the ankle, then one over the instep, round the sole of the foot, then round the ankle and, spirally, up over the leg, to the knee, at which point what remains unapplied should be wound round the limb, and the tapes firmly tied. No skill is required in its application, and it can be entrusted to the patient. The best time to apply it is before the patient rises from bed in the morning, and if it is applied so loosely then as barely to prevent slipping, when the erect posture is assumed it will be comfortably snug. No œdema of the foot follows the proper application of the rubber bandage.

The patient wears the bandage all day, and at bed-time he removes it. The skin will be found moist with sweat, and it should be carefully dried. The bandage should be wiped with a wet sponge and hung up to dry at once. If there is an eruption of the skin, washing it before the application of the bandage with Packer's tar soap will be serviceable. An eruption of small papules is quite common following the use of the rubber bandage.

Dr. Martin adds: "In perhaps, the worst case I ever saw of this sort of ulcer ("chironian"—round or roundish as if punched out of the much-thickened skin with hard, white, almost cartilaginous edges) in an old, feeble, ill-nurtured patient, who had been off and on, under treatment for nearly nine years, whose ulcer had been nominally "cured" again and again, and in each instance, almost immediately on resuming labor, the cicatrix had broken down. I used the bandage alone, as a test case. Of course, I could have expedited the cure by removing the gristly edges of the ulcer by caustic or the knife, but I depended on the bandage only, and in four months, during which the patient continued to labor without any intermission, his ulcer was solidly and well healed, and has now, for nearly five years remained so. I may say here, that not only with this method is the patient *allowed* to continue his ordinary avocations, however laborious, but is much better able to work while wearing the bandage than he would be without it. This is particularly to be noticed in all varicose conditions of the leg." The Martin bandage has been applied successfully in the following diseases and accidents :* "In cases usually called sprain or subluxation of a joint, consisting mainly of injuries or even rupture of one or more ligaments, this bandage is applicable, and has the advantage over the plaster or starch bandage in enabling the patient to exercise the limb, thus averting anchylosis, atrophy of the muscles or ligaments. Also in disease of the bursæ mucosæ, in œdema and anasarca ; in erysipelas and erythema ; cutaneous affections ; in injuries to bones, especially cases of "green-stick" fracture ; in rheumatism and neuralgia; in varicose veins, as a substitute for the laced stocking.

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*Messrs. T. Metcalf & Co., 39 Tremont St., Boston, keep them on hand.

The author promises us further observations of this valuable means, and is willing to answer enquiries upon the points in question.†

We have had some experience in this method of curing stubborn ulcers, and from our success with the ordinary roller bandage and elastic stocking, we were prepared to believe that great things may be done with the bandage of Dr. Martin, and we can add that in three cases of varicose ulcer in which we have tried it, we have obtained good results.

TRANSFUSION OF SMALL QUANTITIES OF BLOOD FOR ANÆMIA.

Transfusion seems not to have found its proper level as a remedial measure, but if a more extended employment of small quantities of blood by the direct method shall meet with as good success as in a case reported by Professor Oré, it will no doubt be a matter of daily application. We are indebted to the London *Medical Examiner* for the account of the following case : A young married woman, had suffered from intermittent fever, hæmorrhage after abortion, neuralgia and convulsions. She became a second time pregnant, and her condition was much aggravated by violent and incessant vomiting. The stomach rejected all food, the anæmia became intense, and her prostrate condition gave rise to serious apprehension. A drop of her blood being placed under the microscope was found to be violet in color, and to contain numerous white blood-cells. The red corpuscles were altered in shape and had ragged borders; one drop of blood was estimated to contain 1,008,255. Forty grammes (about $\frac{2}{3}$ ounce,) of human blood was injected by the direct method, and all the symptoms commenced to improve. The vomiting ceased on the day after the operation, and the patient evinced a strong desire for food. The blood being examined eight days afterwards, 1,818,500 red corpuscles were found in one drop ; these had recovered their normal form and the consistence and color of the blood were natural. Six weeks after the transfusion, the number of red corpuscles was found to be increased three-fold. All the distressing symptoms had subsided and the patient's health was greatly improved. Oré concludes that a rapid proliferation of fresh normal blood corpuscles may be produced by the injection of a very small quantity of blood.

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*Trans. Medical Association for 1877, pages 601-608.

†Address, 27 Dudley St., Boston, Mass.

It has recently been shown that enough blood can be injected with a hypodermic syringe, to arrest immediate collapse, and that it is not necessary to defibrinate the blood. *The precaution to be observed, however, cannot be too strongly impressed, that the blood should be injected* VERY SLOWLY.

LIQUEFACTION OF NITROGEN, HYDROGEN AND ATMOSPHERIC AIR.

Since the announcement in the letter of Dr. EDWARD WARREN, our Paris correspondent, dated January 1st, of the liquefaction of oxygen, information comes to us from the *Journal des Débats* through the London *Times*, that M. Cailletet, (December 31st), who eight days previously had succeeded in liquefying oxygen, was equally fortunate with nitrogen and hydrogen, although, perhaps, it might be said that in the case of the latter gas the performance was not thoroughly complete. * * * The nitrogen was reduced to the condition of little drops, while the hydrogen became visible in form of a vapory cloud. The nitrogen was liquefied under a pressure of 200 atmospheres, and in the case of the hydrogen 280 atmospheres. In both cases the temperature was reduced to 300° below zero centigrade.

M. Cailletet took some air, which he thoroughly dried and purified from carbonic acid, and liquefied it in the same apparatus. When he turned the cock the metamorphosed air trickled out, like some perfumed liquid from an evaporating bottle. The demonstration that it is possible to obtain "lumps of air" is one of the greatest victories of modern physical chemistry. The 31st of December ought to be a memorable anniversary in the scientific calendar.

With these new additions to our list, we await with intense anxiety to know if liquefied oxygen can be made permanently so, and if it may not have a remedial application of exceptional value.

ERGOTIN IN FIBROID TUMORS OF THE UTERUS.

Prof. Simpson dwelt particularly upon the treatment of tumors of the uterus with ergotin, in his late address before the Edinburgh Obstetrical Society. Much of the failure of ergot was due to the inertness of the drug. When Professor Hildebrant, of Konigsberg, demonstrated the safety and certainty with which an active dose of ergotine could be administered hypodermically he made a step of immense importance in the satisfactory treatment of uterine fibroids. From two to five grains of ergotin, can be counted on with great certainty to excite appreciable contractions in the walls of uteri in which the muscular fibres have become hypertrophied. Three grains may be regarded as the medium dose to be given daily, or every second day, or twice a week after the influence of the drug begins to be manifested. Professor Simpson directs that the hypodermic needle be inserted perpendicularly down, right into the muscular strata, selecting the abdominal or gluteal regions, as the best points. Cardiac disease does not constitute a contra-indication to its employment. The cases most likely to yield to this treatment are those in which the tumors are intra-mural, so that being surrounded by layers of muscular fibre and being compressed by its contraction are pushed downwards more rapidly to the uterine orifice, and their nutrition being interfered with, and they may undergo fatty degeneration, or wither, or are extruded.

A SIMPLE PLAN FOR EVACUATING THE PLEURAL CAVITY.

Surgery advanced from Bowditch's canula and trocar to the aspirator, and this last device completes the needed supply. Dr. Girgensohn, of Riga, taps the chest with an ordinary canula and trocar, withdraws the latter, and slips over the end of the canula a caoutchouc tube three to six feet long, and of a suitable diameter, closed at the lower end with a clip or small stop-cock, and provides himself with a 1 to 2 per cent. solution of carbolic acid. The tap is then opened under the surface of the solution of carbolic acid in a large vessel placed at a lower level than the opening in the chest, so that the tube is converted into a syphon. A serous effusion of six to eight pounds weight, can be in this way evacuated, in a quarter of an hour. If the stream stops from any cause, the tube can be alternately compressed and allowed to expand, so as to exert a pumping action on the fluid higher up. Where it is absolutely essential to prevent air entering the chest, Girgensohn recommends the trocar to be passed through the wall of the caoutchouc tube, into the upper end of which the canula is tied ; the tube is then filled with carbolic solution from a funnel inserted into the raised lower end, so as to completely expel all air. The trocar is inserted with the canula into the chest, and withdrawn gradually until the necessary communication between the tube and the chest is established, and then completely withdrawn, and the tube slipped forward over the canula and tied, so as to close any opening left by the trocar. The fluid is then drawn off siphon fashion as before. The author claims for his method the advantages of simplicity, and that the whole apparatus is easily cleansed and kept in order.—*Medical Times and Gazette, Berlin Klin. Woch.*

EXPLOSION OF A CHLORATE OF POTASSIUM MIXTURE.

A correspondent of *New Remedies* reports a case of explosion in the following circumstances. The following prescription was made :

℞
Tinct. ferri chloridi
Glycerinæ puræ
Potassii chloratis āā ℥ ss. m.

The above was intended to be farther diluted for a gargle, being put up in this compact form for convenience. The correspondent placed it in his satchel, where after a while it exploded with great violence. The editor of *New Remedies* shows that the explosive compound formed was not nitro-glycerine, but thinks it is highly probable that it was the substance which Davy termed euchlorine, a compound which explodes at 70° C. (126 F). Warning is necessary now that chlorate of potassium enters into so many diphtheria prescriptions. It is not that practitioners need instruction, but reminders of these dangers. That chlorate of potash cannot be mixed with powdered tannin, sulphur, and phosphorous is already known ; now we add this new caution.

GOA POWDER IN PSORIASIS.

Reports are now being monthly added to the efficacy of chrysophanic acid in psoriasis, an account of which we gave in the January number of the JOURNAL. Another report comes to us from the *Indian Medical Gazette*, by Theobold Ringer. He reports the case of a patient who had suffered from an obstinate and intractable attack of psoriasis, which after resisting all kinds of treatment finally yielded to Goa powder. It will be remembered that chrysophanic acid is the active principle of this powder. The diseased parts were gently rubbed with a wet sponge, and a little of the powder was applied with the finger. This was repeated every morning, and acted admirably ; in a fortnight the disease which had worried the patient for eighteen months had quite disappeared. The same patient had suffered at the same time with agonizing attacks of facial neuralgia for which quinine was administered in solution in hydrobomic acid, and was administered effectually; but Dr. Ringer is sure the Goa powder cured the psoriasis. It will be seen that in this case phosphorous was not given.

COLLECTANEA AND ANSWERS TO CORRESPONDENTS.

THE LONDON SECULAR PRESS ON DOCTORS.

"Of such inestimable value are the services rendered to society by the medical profession—and especially by its leaders, who have mastered its deepest secrets, who hold in their hands the mighty power of alleviating human suffering, upon whose wisdom and judgment hang often the issues of life and death—that they are fairly entitled to receive from the verdict of public opinion the remedy they are so loth to claim for themselves. Nor must it be forgotten with what industrious and praiseworthy effort all such have fought their way up to the topmost rungs: the years of patient persevering study and concentrated thought; the long struggle with adversity before fame came with full hands; the constant warfare with contagious deadly disease, in which are imperilled not only their own valuable lives, but those of their dear ones at home. More than one, whose name is familiar on every tongue, has seen his family decimated thus, or has been brought to death's door himself again and again, by the fell enemy he has made it his proud 'specialty' to combat, recovering slowly to find, perhaps, that in his enforced absence others have nearly outstripped him in the race, and he has to begin the world anew. It is not such men as these—the good genii, neither more nor less, of the human race—who should be subjected to the losses and humiliations we have described. Their life is one long round of continual harrassing anxieties, of perpetual discomfort, of infinite toil. They take their meals by snatches, standing, or in their carriages as they are whirled to and fro; their rest is constantly broken; they can never call a single hour wholly or entirely their own. Self-sacrificing, indefatigable, uncomplaining—so great and good is the work they do that they deserve a reward, unstinting, cheerfully rendered; not grudgingly, sparingly, tardily or not at all. A doctor's fee is essentially a debt of honor; yet more, it is a debt of gratitude, and it should be guaranteed with all the assurances of a solemn and irrefragable bond."—*Lancet, from London World.*

A FULL HEAD OF URINE AS A DILATOR OF THE URETHRA.

An old practice has been recently revived (*Bulletin de Thérapeutique*) of dilating the urethra by compression exerted just behind the glans just before passing urine. Here is the summary: 1. That dilatation produced by resisting the desire to pass the urine until considerable quantity has accumulated, and the compression exerted behind the glans as above stated after a gonorrhœa of some duration, may act as a prophylactic of stricture. 2. If the stricture has not advanced very far, if it does not rerstore it, it will make micturition easier. 3. It is useful after urethrotomy in retarding relapse. 4. It may prove of some service in varices of the prostate, neck of the bladder, and membranous part of the urethra. 5. Another class of cases it is useful in, viz: those cases of elderly persons with enlarged prostate in which the urethral canal is twisted out of the normal course.

The inclination in gonorrhœa, stricture and enlarged prostate is to empty the bladder frequently, and instructions to restrain the desire will succeed in but a limited number of cases, but it is well to know that such a means promises relief, especially to those who have not daily access to the advice of a surgeon.

TO REMOVE FOREIGN BODIES FROM THE EAR.

Mr. James Keene, F. R. C. S., in London *Medical Examiner* describes a safe way to remove foreign bodies from the external auditory canal. Use a syringe with a fine probe-pointed nozzle, the stream of water being directed towards that part of the meatus where there is a space between the walls of the canal and the foreign body. The liquid will thus penetrate behind, and will, if it is not too firmly impacted, gradually wash it out. Should this fail, as it will sometimes, a very simple instrument can be extemporized from the bristle of an ordinary house-brush formed into a loop between the points of a hair-pin. With a little care this may often be inserted behind the foreign body, which will then be easily removed. A loop of this kind is not rigid enough to injure the membrana tympani, even though it were to press upon it, and if properly handled, will not drive the foreign body further into the ear.

Dr. Dieulafoy points out, in the *Gazette Hebdomadaire*, that the cause of sudden death in typhoid fever is due rather to reflex influence upon the heart, from irritation of the great sympathetic in the intestines, and not to cerebral anæmia, embolism, hemorrhage, &c., as variously held.

Dr. Thoulouse recommends as a vesicant a disc of fine cloth soaked in oil, and besprinkled with corrosive sublimate, in fine powder.—*Medical Press and Circular.*

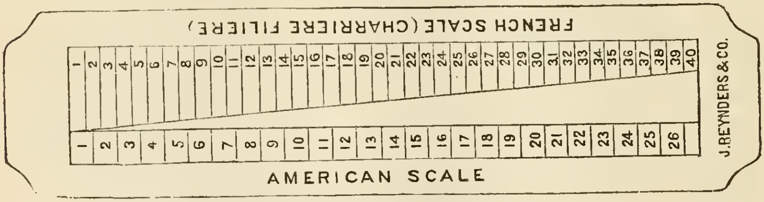
Dr. Jaillard, of Algiers, employs the microscope for the detection of butter adulterated with animal fats such as suet. Under the microscope butter globules are round, while other fats appear in needle-shaped or branched crystals.—*New York Medical Record.*

ROOT OF BLACK-GUM OR TUPELO FOR TENTS AND BOUGIES.

The root of *Nyssa aquatica*, black-gum, sour-gum, or tupelo tree as it is variously called, is recommended to substitute sponge and sea-tangle for dilating the os uteri. The material is abundant, and its well-known properties as utilized in the Southern States during the war, incline us to believe it will answer the purpose designated.

We find by experiment, that if the soft interior of the root be cut into pieces the size desired for a tent, fill the pores with tragacanth or gum arabic mucilage, which it readily takes up, and wrap firmly with stout flax thread, it can be compressed into one-third or one-quarter its original thickness.

It has the advantage of being easily divided with the grain, and roots can be easily obtained to make bougies of any desired length. It is not even necessary to use the mucilage in preparing the tents or bougies, as very considerable compression can be made by simply wrapping, or rolling between two smooth surfaces. Its elasticity is not equal to sponge and sea-tangle, but it is easy to work, and within the reach of nearly every one, and it is susceptible of a finish which cannot be given to either of the substances named, and excels sea-tangle in the toughness of its fibre.



The accompanying cut represents (half size) a simple, convenient and accurate "catheter gauge," devised by Dr. Handerson, of New York city. It consists of a metal plate, perforated by a triangular opening 169.33 mm. (6.67 in.) in length, with a width at the base of 13.33 mm. (0.525 in.) This opening is graduated to both French (Charrière) and American (Van Buren) scales, while the reverse side of the plate contains the nearest approximation to the so-called English scales, with a comparative scale of English inches and French millimetres. The catheter, sound, etc., to be measured, is simply inserted in the base of the opening, and slid towards the apex as far as it will go, when the parallel lines will at once indicate its size according to either scale.—*Medical Record, No.* 361.

A NEW LIVING DOUBLE MONSTER.

In the *Wiener Med. Woch.*, for December 9, Professor Hesche, furnishes the description of an examination he has made at Vienna.

of a living girl, seventeen years of age, who exhibits an example of a still rarer form of monstrosity than the Siamese twins, or the two-headed Nightingale, inasmuch as in her case the formation, in place of the upper part of the body being double as in their cases, it consists in a doubling of it only below the second lumbar vertebra, the upper portion resembling that of a pleasing delicate girl from ten to twelve years of age. The specimen is a case of Förster's *Dipygus tetrapus.—Medical Times and Gazette, January 19th.*

ANALYSIS OF THE MILK OF AN ESQUIMAUX WOMAN.

Among the Esquimaux women, who are at present at the Paris Jardin d'Acclimation, is a young mother who is sucking two infants. Dr. Condereau undertook the analysis of her milk in order to compare it with that of Europeans. He found that while it contained a smaller proportion of salts, it is richer in sugar and especially in fat. This richness in the hydro-carbons accords with the habitual regimen of the Esquimaux, who resist cold by the consumption of an enormous amount of fatty bodies.—*Medical Times and Gazette, from Union Méd.*

THREATENED STRIKE OF DOCTORS.

A great sensation has lately been produced at Havre, by the issue of a circular to their patients by the doctors of that city. It is nothing less than the menace of a strike on the part of the doctors, who announce a rise in the tariff of their fees. In future, every visit sought for as urgent, or at a fixed hour, is to be charged as a double visit, and every night-visit will be taxed according to the established classes, 10 fr., 15 fr., or 20 fr. *Le Havre* says that this exhorbitant pretence has excited general indignation.—*Gaz. Hebd.*

EXCISION OF LARYNX AND REPACEMENT BY AN ARTIFICIAL ONE.

Dr. Foulis, of Glasgow, (*Medical Times*) attended the last meeting of the Medical Society of London, and brought with him the man upon whom he lately performed the operation of excision of the larynx. He also exhibited the artificial larynx by means of which the patient was enabled to read out loud, and converse. Professor Tyndall lent to the Society for the evening one of König's revolving mirrors, so that the waves of sound were demonstrated, the voice being produced by various reeds, each representing a musical note.

DIGESTION OF AN OSTRICH.

An Austria military paper says that some bread issued to the Russian soldiers in Bulgaria has been recently examined in Vienna, and found by analysis to contain 19 per cent. of saw-dust and 14 per cent. of sand ! A crumb of comfort in this, to the late Confederate soldier who got scanty weight of *solid bread*, and was rather pleased with its indigestibility as it stayed by him longer.

ANOTHER FUCUS.

A correspondent reminds us that the *fucus vesiculosus* which we mentioned in the January number of the JOURNAL is not the only candidate for honors in this genus, but that the *fucus helminthocorton* was lauded by Wm. Farr, F. R. S., in 1822, as a remedy for cancer, and that it became sufficiently prominent to draw forth satirical comment in the *Medico-Chirurgical Review*.

PRESENCE OF COMMON SALT AS AN INDICATOR OF SEWAGE CONTAMINATION.

Professor Lattimore, of Rochester, says : "Whenever the proportion of salt in well-water rises above a very few grains per gallon, contamination by sewage or house-drainings may be confidently asserted."—*Popular Science Monthly, February*.

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BOOKS AND PAMPHLETS RECEIVED.

Action of Medicines, Isaac Ott, M. D. ; Lindsay & Blakiston, 25 S. 6th St., Philadelphia.

Ophthalmic and Otic Memoranda. By Professors Roosa and Ely; Wm. Wood & Co., 27 Great Jones street, New York.

Transactions of the American Medical Association, Vol. 28, 1877. Printed for the Association. Collins, Printer, 705 Jayne street, Philadelphia.

Cantho-Plasty as a Remedy in Certain Diseases of the Eye. By C. R. Agnew ; G. P. Putnam & Sons, 4th Avenue, and 23d street, New York.

On the Dressing of Stumps. By Louis Bauer, M. D., M. R. C. S., England. Reprinted from St. Louis Clinical Record.

Report of Board of Directors and Superintendent of the Insane

Asylum, of North Carolina. Official year ending Nov. 30th, 1877. Raleigh; Edwards & Broughton.

Ferns of North America. By Professor Daniel C. Eaton, of Yale College: S. E. Cassino, Naturalist's Agency, Salem, Mass., Part II. Price $1.

House Air the Cause and Promoter of Disease. By Professor Frank Donaldson, M. D., University of Maryland; Reprinted from Maryland State Board of Health Reports, 1878.

A Succinct History of the Plan of Treatment of Potts' Disease by Suspension, and the use of the Plaster of Paris Bandage. By Lewis A. Sayre, M. D.; Reprint from the Richmond and Louisville Medical Journal, 1878.

Michigan Medical News, Detroit, Michigan.

Annual Report of the Columbia Hospital for Women and Lying-in-Asylum, for year ending June 30th, 1877. P. J. Murphy, M. D., Surgeon in charge; Washington Government Printing Office. 1877.

Is the Human Eye Changing its Form under the Influence of Modern Education? By Edward G. Loring, M. D., New York, 1878.

Analysis of Ten Hundred and Sixty Cases of Asthenopia. By C. R. Agnew, M. D., New York; D. Appleton & Co., 1877.

A Contribution to the Differential Diagnosis between Hollow Uterine Polypus, and complete inversion of the Uterus. By G. E. Sussdorf, M. D., New York; Reprint from American Journal Obs., 1877.

Malaria and Struma, in their relation to the Etiology of Skin Diseases. By L. P. Yandell, Jr., M. D., Louisville, Ky.; Reprint from American Practitioner, January, 1878.

OBITUARY.

DR. WARREN B. SHORT.

Dr. Warren B. Short, died recently at his home in Flemington, N. C., on the 3d of February. He was on the threshold of his professional life, with every promise of usefulness and distinction.

DR. RASPAIL.

Dr. Raspail, the venerable and eccentric French physician and versatile scientist, died last month. He was known better on this side of the Atlantic by the mixture of camphor and salt in water, and known by the name of Raspail's lotion.

DR. EDMUND R. PEASLEE.

Dr. Edmund R. Peaslee died in the city of New York, of pneumonia, on January 21st, 1878, in his 64th year. He occupied a very prominent position in the profession, taking high rank as a gynæcologist.

His contributions to periodical medical literature were frequent and of a high order. For some years he has occupied the chair of gynæcology in Bellevue Hospital Medical College ; he was also one of the Surgeons to the Woman's Hospital, and was thus a participant in the late unfortunate controvesy which grew out of the management of that institution.

He wrote and published in 1854, a work on "Human Histology &c.," in which the experiments of Robin and Verdeil were first made known to the profession in America.

WM. STOKES, M. D., D. C. L., F. R. S., &C.

The career of this great teacher and physician was ended by his death on Monday, January 7th. He had attained the advanced age of 74 years, and continued the discharge of the duties of his office of member of the General Medical Council for Ireland, until May, 1877, when he resigned.

The works which will be remembered as his greatest are "Treatise on the Diagnosis and Treatment of Diseases of the Chest," (1837) ; "Diseases of the Heart and Aorta," (1854) ; and his "Lectures on Fever," (1874).

Dr. Stokes contributed many articles to the "Cyclopædia of Practical Medicine." From 1832 to 1842 he was co-editor with Dr. Graves, of the Dublin *Journal of Medicine.*

"In nothing" observes a biographer "did Stokes more shine than as a teacher of medicine by the hospital bed-side. His pupils—and they are reckoned by hundreds—never ceased to recite how thorough was his investigation of a case, how accurate his diagnosis, and how often prophetic was his prognosis. * * * * * *

During all his life he was a man of lasting and affectionate personal friendships, and was surrounded by a circle who were as fond as they were as proud of him. His memory will long be dear to them, and his place will be sadly missed amongst them ; and now that he is taken, many other tongues besides theirs will join in saying, and sincerely feeling, that William Stokes has left behind him no nobler specimen of our Celtic race—nature, intellect and culture."

"Oxford gave him its honorary D. C. L., in 1865, and Cambridge its honorary LL. D., in 1874. In 1875 the German Emperor presented him with the envied Prussian order "*Pour la Mérite*," in company with such distinguished men as Longfellow, Bancroft, and Schwann. Edinburgh also conferred its honorary LL. D.

Like all really great men in our profession, his intellect would not bear the trammels of mere money-getting doctoring. He was a great physician and permitted no pursuit to interfere with his study of his profession and his care of his patients ; but he was something more—a man of ardent literary and scientific taste, an astute observer, and a zealous worker in many extra professional pursuits."—*Medical Press and Circular.*

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

TROMMER'S EXTRACT OF MALT WITH COD-LIVER OIL AND PHOSPHOROUS.

Professor Markoe, of Boston, recently called attention to the fact that extract of malt afforded one of the best means fer emulsifying cod-liver oil, and a short time previously Dr. Squibb had called attention to cod-liver oil as a substance best calculated to protect phosphorous from oxidation and favor its administration in the small doses required.

The Trommer Extract of Malt Company, of Fremont, Ohio, the excellence of whose productions we have already had occasion to comment upon, send us a sample in which all three of these important agents are combined. Equal parts of pure extract of Canadian barley-malt and fresh Norwegian cod-liver oil have added to them 1-100 of a grain of phosphorous to the dose (1 tablespoonful.)

This combination offers superior advantages as a remedy in a number of diseases characterized by disturbances of nutrition and innervation, and the reputation of the manufacturers is a guarantee of the care taken to furnish a reliable article—*New Remedies for January*, 1878.

THE SEVEN SPRINGS "IRON AND ALUM MASS."

The attention of the profession is called to this valuable "mineral water" preparation, an advertisement of which appears in this Journal. From the endorsements given to it, by eminent practitioners, we have no doubt of its efficacy in supplying the want of a much needed remedy for a certain class of diseases and ailments. It is highly recommended, and must impress the physician of its importance in his practice.

Durham Smoking Tobacco—goes to all parts of the world, and its sale is still increasing.

Warner & Co's. Parvules—Elegant pharmaceutical specimens of the minimum doses of medicine for children.

Reed & Carnrick—Maltine and its compounds, rapidly growing in professional and popular estimation.

Devlin & Co—This old house still leads, and retains the confidence of the public.

Trowbridge's Impervious Paper—Specimens sent on receipt of postage stamp. See advertisement.

Scott & Bowne—A complete and reliable emulsion of pure cod-liver oil with hypophosphites at last perfected.

THE PART THAT WARM WATER PLAYS IN THE COMPLETE EXPULSION OF TAPE-WORM.

The Swiss treatment of injecting warm water after the administration of teniacides, which claims to be so eminently successful, agrees somewhat with our recent experience in the treatment of tape-worm. It was pointed out in the Transactions of the North Carolina Medical Society for 1877, that successful expulsion followed the evacuation of the contents of the bowels into a vessel of hot water at stool, and upon the theory, that our recent experience confirms, we believe that the hot water or the steam keeps the worm alive, thereby rendering each "joint" tenacious enough to adhere, and drag away the others.

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MILK SICKNESS.

The continuation of the article on Milk Sickness, owing to the sickness of Dr. H. G. Woodfin, must be delayed until March, as it reached us too late for this number.

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TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, FOR 1877.

Notice of this volume and of the transactions of the *Virginia Medical Society* for 1877, will appear in our next issue.

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MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA,
SECRETARY'S OFFICE,
LITTLETON, N. C., January 30th, 1878.

It is earnestly desired that members of this Society having papers to read, will announce the title in the March, April and May numbers of the NORTH CAROLINA MEDICAL JOURNAL. A full and free discussion of papers can best be accomplished by such preparation. Notice sent to the NORTH CAROLINA MEDICAL JOURNAL will be promptly attended to, as I have made this arrangement with the Editors: of course, due consideration will be given to papers not so announced. It is hoped too, that early preparation will be made to make this the fullest and best meeting of the Society. Arrangements by the Goldsborough Committee will be announced in due time. L. J. PICÖT, M. D., Secretary.

NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., Editors.

Number 3. Wilmington, March, 1878. Vol. 1.

ORIGINAL COMMUNICATIONS.

MILK SICKNESS—Art. 2.*

By Dr. H. G. Woodfin, of Franklin, Macon county, N. C.

In the former number I stated that, the disease was attended with a peculiar, though not offensive odor. To me, this odor is not more offensive than the breath of a healthy person after eating strong aromatic vegetables; and as readily distinguished as that of camphor, spirits turpentine, or any familiar drug. It is frequently recognized beyond the room in which the patient is confined. The physician, of some experience, will usually recognize the disease on first observation of the patient's breath, the expression of the eye, and the singular position of the head and extremities, yet, he is not to conclude that he is ready to proceed with his treatment, until he has carefully examined the patient in regard to every important function. Every case has its own peculiarities. Each symptom taken separately may be such as he has witnessed in others; but taken as a whole, the case will differ in some respects from any other—and I know of no disease in which a careful diagnosis, and a minute examination of all the pathological indications is more essential, and certainly none, in which a mistake is more likely to be fatal. I can think of no disease in which a larger proportion of cases will recover under proper treatment that would otherwise prove fatal.

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*Continued from January number.

In this opinion, my medical friends concur, yet no hasty judgment or uncharitable remarks should be passed on those who may have been thus deceived. On the contrary, an apology may be offered, from circumstances frequently attending cases of milk sickness.

The patient may have been the subject of some other malady, or the case may have run to such a stage, and been treated in such a manner before calling in the physician, as to obscure the case in its ordinary pathological indications. These mistakes may be excusable, but not unavoidable, if every precaution is observed. I think the disease may be distinguished from any other at the last breath, even in the most prostrated cases. Hence, the necessity of close attention to those symptoms that belong exclusively to milk sickness.

To the *treatment* of this disease as it occurs in the human subject, my attention has been chiefly directed. And so far as that treatment has been successful, those of the profession, less favorably situated for observation are entitled to the benefit of it. If otherwise, and errors committed and afterwards detected, they should be stated with equal candor. If I could prescribe a specific course of treatment to be applied in all cases, as an infallible remedy where the cases are curable, the task would be quite an easy one. I have already stated that every case has its peculiarities, and must be met accordingly.

The first indications are to quiet the stomach in its frequent efforts to vomit, and move the bowels to action. These ends must be affected, but not hastily and at all hazards. Here the physician is more likely to err than at any other point, at least, such has been my misfortune, as I shall notice more particularly hereafter.

Although the vomiting is frequent and persistent, and the bowels are inactive for several days, the greatest danger is not here, nor the probabilities of inflammation such as I once supposed.

The patient may take gentle cathartics, pleasant juleps and stimulating *tonics,* just as the stomach will retain it and no faster. Castor oil answers a good purpose when it can be retained, and is generally used. Bear's oil is preferable, when it can be procured, in a pure state ; being free from taste or smell, is usually retained and acts as favorable as any other. *Diuretics* should be used at the same time, no faster, however, than the stomach will retain them. Bi-tart. pot.. spirits nitre, and some mild mucilage, will answer this purpose. Diaphoretics are highly necessary, and should be freely given as soon as they can be retained, and until then, the skin and especially the extremities should be freely rubbed with wet cloths, dipped in strong vinegar or whiskey—and, if necessary, add pepper or some other escharotic.

I have found the bi-carb. soda acts favorably in allaying thirst and the sense of burning in the cardiac region. In the commencement, if the patient makes frequent efforts to vomit without success, I favor the indications, or, rather the efforts of nature, by a gentle dose of ipecac and warm water. Brandy and honey have been used as a popular remedy for many years, and to some extent, to the present day. This treatment when cautiously observed, may have caused some persons to recover who otherwise would have died ; and probably a greater number to die that might have recovered without medical treatment.

That brandy is a specific, or an antidote to the poison, is certainly preposterous. Yet, I use spirits of some kind more freely in this than any other form of disease, when the patient receives it kindly. With it, I use tonics, such as gentian, columba and cinchona, usually in the form of tincture. Occasionally I make the juleps as pleasant to the taste as possible, and as recovery advances, the tincture should be strengthened with tonics. Convalescence is not marked by any certain crisis—yet, not unfrequently the vomiting ceases, the bowels act, the perturbations of the heart diminish, and the extremities become warmer almost simultaneously ; the patient takes a longer sleep than usual, and gentle perspiration may be discovered ; and he wakes up unconscious of any suffering—would attempt to rise from his bed if not restrained, being insensible of his weakness. These, or similar favorable indications may recur at uncertain intervals, several times before convalescence is decidedly established—or recovery may proceed from the first favorable symptoms. Danger of a recurrence of the disease, after recovery has fairly commenced, is imminent, from the fact that the disease *incu-*

bates, and may be renewed at any time before complete recovery. Yet this has not been the case with any patient under my immediate care.

Recovery may commence within twenty-four hours after the treatment has been commenced ; usually within 3 or 4 days, and it is completed in 10 or 12 days, sometimes much sooner. If the treatment has been long neglected, recovery may not be expected so soon. When death takes place it is usually in 8 or 10 days after the attack. The attack will usually occur in a week or ten days after using the milk and butter ; may take place in twenty-four hours, or may be delayed for several weeks, or even months. This is so dependent on circumstances, such as violent exercise, that uniformity as to time cannot be determined.

Persons who have once suffered with this disease are more liable to subsequent attacks than others. That those who have suffered severely from this disease feel the effects of it ever after, is certainly without foundation. Where the contrast between *life* and *death* has been a close and doubtful one for several weeks without appropriate remedies, and a strong constitution prevailed, at the expense of a shattered nervous system, the muscular power reduced to its minimum, and the capsular ligaments of the joints so contracted, as barely to admit of motion, I cannot say what would be his condition in after life.

When patients have been properly treated, no trace or symptom of the disease is ever felt after recovery.

What proportion of cases fairly treated will ordinarily recover ?

If the treatment is commenced soon after the disease is clearly developed, I answer almost *one hundred per cent.* Perhaps in disease of a dangerous tendency, yields more certainly to proper treatment, although it may not yield so readily as some others. This I say, not boastingly, nor by way of disparagement to those who may not have been quite so successful ; but for the encouragement of sufferers, and to inspire confidence in the young practitioner ; that he need not despair of success because of unfavorable indications, or unsatisfactory results in his first efforts.

That my experience in this disease has not been confined to narrow limits to a few years, or a small number of cases is well known in this part of the State. And I can confidently say in the course of 43 years, I have witnessed the death of less than a half dozen cases, and all of them, save one, in a hopeless condition before I saw them.

The facts of this one case should be candidly stated, inasmuch as it proved fatal under a hasty treatment, and a misapprehension of the chief sources of danger.

The case was that of Miss Morrow, a large, corpulent young woman of about 20 years, in the summer of 1836, the first case in second year of my experience of this disease. The disease was contracted some twenty-five miles away and her strength much exhausted on reaching home. She suffered some five days or more, before my arrival, with nausea and frequent vomiting, for a few minutes before each emesis, would appear deathly sick, her bowels unmoved during that time, with cold extremities and other symptoms usually attending such cases.

I determined to move the bowels as speedily as possible, and to that end used the most active cathartics that could be retained and as soon as one dose would be ejected it was followed by another. After 30 hours or more I succeeded in that purpose, but her vital energies were exhausted, she never rallied and died of anæmia on the third day after my arrival.

The mistake here consisted in supposing the alimentary canal to be the chief seat of danger, and *that* through which remedies were to be conveyed to other parts of the system.

In reality there is no appearance of enteritis, and little danger of additional accumulation, as the excretions are well nigh suspended; nor should we overlook the fact that constipation, under such circumstances, is more easily overcome and the peristaltic action renewed by stimulating tonics, than by drastic cathartics. And what was still more to be regretted, the indications of danger that now impress me most forcibly should then have been neglected until it was *too late*. The skin is dry and almost bronzed, the extremities flexed and cold, the capillary circulation imperceptible, secretion and alimentation well nigh suspended, the sources of animal heat dried up, the pulsation of the large arteries may be seen in the motion of the bed covers, and every systole of the heart proclaims that the citadel of life is invaded, and that we should not trifle with the remaining sparks of vitality by any debilitating course of treatment. The strength of the patient must be cured, for at every stage and throughout the whole course of the disease; otherwise if the patient recovers, he does so in spite of improper treatment.

These pages have been written from memory, and with no private ends in view. The chief object has been to aid others, especially the young or strange physician in meeting responsibilities he may be called on to assume where no assistance or counsel may be at his command.

For any want of systematic arrangement or perspicuity of style. I have no apologies.

I have thought the history, pathology and treatment of *Milk Sickness*, of sufficient magnitude to engage the attention of the profession even if the remote cause should remain as it now does, in obscurity.

I have nothing new to offer as to its *pathogenesis*, and must be excused for expressing an opinion without any facts to sustain it.

The theories that have been offered, and the discoveries supposed to have been made are pertinent to the subject, whether containing any practical suggestions or otherwise.

1. Mineral poisons, mineral waters and mineral exhalations from the earth, have been supposed to cause the disease. These scarcely need be noticed, as their effects are so direct and uniform, and so far different from this disease as to deceive no careful observer.

2. Vegetable poisons are supposed by many to be the cause. This may be true of some unknown substance belonging to the vegetable kingdom, but those claimed as such are as far from the mark as the mineral poisons, but as they are advocated by men of science and experience, they are entitled to a respectful consideration.

The *eupatorium* has been confidently affirmed to be the cause. This plant is said to abound in all parts of the United States, and certainly grows abundantly where this disease has never been known or suspected.

The *Rhus-toxicodendron* has been placed before the public more than once, by professional men claiming some experience in this disease. Now all our citizens are familiar with the *poison oak*, as it is seen in all sections of this country, however remote from the localities infected, with milk-sick-poison, and they shun it as a deadly poison, the touch only being sufficient to produce cutaneous disease resembling erysipelas.

Doubtless these, as well as many other shrubs will poison animals that eat them. But all poison is not milk sickness. They are direct and certain in their action, and the flesh of the animal so poisoned does not produce disease in others that eat the carcasses.

3. It has been observed that its effects closely resemble the phenomena produced by *animal poison*. And also that it may be produced by organized diseased germs or microscopic fungi.

There may be some plausibility in this hypothesis; but on the supposition that the disease has an animalcular origin I should not know how to reconcile that with the well established fact of its confinement to certain localities, immediately outside of which there is no danger.

That the microscope and chemical appliances may be brought to bear upon this investigation, and that by diligent search and close observation this mysterious substance that causes milk sickness in cattle may be discovered, is not altogether improbable and is certainly desirable.

If the substance should be discovered, and in sufficient quantity to cause animals to take it, the test can easily be made, without the aid of science or chemical analysis—two facts, however, must clearly concur.

1. It will sicken and kill a portion of the animals, while others taking the same quantity remain healthy.

2. That the flesh of those that die will kill the dogs that eat it.

Or if it be given to milk cows and some of them remain unhurt while the calves and dogs using the milk sicken and die, the test would be conclusive.

It is said that the milk as it is drawn from the cow does not foam —and I should have inquired further into the *peculiarity*, but the same was affirmed of the milk of cows that eat mushrooms, and hence it was not a peculiarity and would prove nothing. I should very much like to see the discovery made—and will cheerfully aid the younger members of the profession in their effort in that direction.

The field is still open. The lands that contain it in any of these counties are not in cultivation, nor likely to be for generations to come, and although the number of cases occurring in the last seven years, as compared with seven years, 30 or 40 years ago, is in a ratio not greater than one to five, they are sufficiently numerous for practical purposes.

If any one is curious to know why, with my long and familiar acquaintance with this disease, as presented in the human subject.

I have made so little enquiry into its etiology—if he will inquire into the surroundings he will ascertain that my responsibilities in other directions were quite enough for my capacity.

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COLICA PICTONUM.

By Robert L. Payne, M. D., Lexington, N. C., President of the Medical Society of North Carolina.

Ever since I began the practice of medicine in Davidson County, I have at various times, and in numerous localities met with a disease which I have regarded as Lead Colic, but which some of the fraternity believed to be "liver disease," or some *new thing* without a name.

The disease has not been confined to any special localities; in truth, I have seen it as frequently in highly malarious sections of country, as upon the most elevated ridges.

It occurs generally sporadically, sometimes endemically, but I have never seen it as an epidemic.

It occurs too, at all seasons of the year, and does not seem to be at all affected by atmospheric changes.

The prodromic symptoms of this disease as it has occurred in my practice, are general lassitude, anorexia, pain in the back and limbs, and a very decided tendency to constipation.

In many cases the constipation is obstinate from the outset. In some, the tongue is slightly furred, in others, not at all. Pain in the abdomen is present in every case, and is located in the region of the navel, and although slight at first, soon becomes so intense as to make the poor sufferer writhe with agony. Soon the patient becomes emaciated, and complains of great muscular debility. His features are shrunken and sharp, and of a peculiar dead, tawny, or dusky hue. The pain when most severe, extends from the umbilicus up into the epigastric and hypochondriac regions, and downward into the hypogastric and iliac regions, and sometimes even into the genital organs.

The abdomen is flat and hard, and very frequently retracted.

Nausea and sometimes vomiting are present in the majority of cases.

The evacuation from the bowels are hard, dry, and scybalous.

Nearly all of them complain of great weakness in the arms, and in several cases paralysis of the extensors was well developed.

Four-fifths of these cases have a blue or grayish line along the gums, which line is absent where a tooth has been extracted.

There is no fever at the outset; but in the more obstinate cases it is developed after two or three weeks's illness.

It is more commonly present in those cases that have been too long neglected.

I have never been able to find lead in the excretions, nevertheless, I feel confident that the disease can be nothing else but true painter's colic.

My friend, Dr. Henry T. Bahnson, of Salem, N. C., read a very excellent article before the Medical Society of North Carolina, at Fayetteville,* in which he speaks of a disease "known among the common people" as "Liver Disease," and which I believe to be the same disease I have above described, although, some of the symptoms met with in my cases, were not present in those he treated. He mentions the peculiar cadaverous expression, the want of appetite, the tendency to constipation, the general malaise, the pain about the umbilicus, the retracted abdomen, and the blue line along the gums; but did not observe paralysis of the extensors, or scybalous discharges in his cases.

Now, then, with the symptoms which he has detailed in his paper, and which I have endeavored to give faithfully above, can the disease possibly be liver disease? Can it be anything else but lead colic?

The question may be asked, why can you not detect lead in the excretions? To this, I can give no answer, unless it be that our tests are not sufficiently accurate, or were not expertly employed.

Again, another question may be put, to-wit: How is the poison introduced into the system? This last, I believe, can be satisfactorily answered.

Our German population consume large quantities of milk, stewed fruit, and various kinds of pies.

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*Transactions for 1876.

The milk is kept in earthenware "crocks," the fruit is very slowly stewed in earthenware vessels, the pies are baked in earthenware dishes, and these vessels are often glazed with lead, or lead enters into their composition. This, I believe, to be the true source of this disease, because no case has fallen into my hands in those families where such vessels are not used, except a few cases among those who work in lead.

But there are other sources from which lead might come, for instance, the miserable paper curtains, painted furniture, etc., etc. Prof. Flint, says: "Some years ago, a large number of persons within a limited district in Ohio, were affected with a disease, which, for some time, was regarded as a novel epidemic, (like ours ?) and received the name of dry cholera. It was found out to have the diagnostic characters of lead colic, and was traced to the common use of a cheap kind of earthenware made in that vicinity, into the glazing of which lead entered."

But if we could find no source for the lead, and still had cases with the above symptoms, could we make anything else of it but lead colic ?

It really seems to me that the retracted belly, the pain about the umbillicus, and the blue line along the edges of the gums, are sufficient in themselves to establish the diagnosis !

Now, then, let me adduce a little evidence regarding this blue line :

It is true, that Taylor in his Medical Jurisprudence, tells us that a blue line along the gums may be caused by other poisons, but he adds: "It has, however, been so frequently observed, that most pathologists now regard it as a well-marked pathognomonic symptom," of lead poisoning, and all the other authorities with which I am familiar regard it as characteristic.

Eberle mentions this characteristic line.

Watson in his lectures says: "Very recently a most curious symptom, pathognomonic, I believe, of the presence of lead in the system, has been pointed out by Dr. Burton, and now that it has been pointed out, one can hardly understand how it escaped discovery so long."

The venerable Dr. Edwin A. Anderson, of Wilmington, N. C., whose learning and skill as a diagnostician entitle him to more than a great local reputation, reported in the *American Journal of Medical Sciences*, some cases of lead poisoning which were very characteristic. The diagnosis was very clearly made out, and the blue line was carefully described. These cases were caused by drinking water carried across and under the Northeast Cape Fear River to a saw-mill on Point Peter opposite Wilmington, in lead pipes.

Wood says: "As first noticed by Dr. Burton, the gums present especially at their margin, a pale, bluish, gray color, characteristic of the action of lead upon the system."

Dickson informs us that, "The retraction of the muscles of the abdomen and the blue line along the gums * * * * * are considered characteristic."

Hartshorne says: "There is a blue line along the edge of the gums."

Flint says: "A valuable sign was indicated by Tanquerel in his treatise on Lead Diseases. * * * * This sign consists in a blue or slate discoloration of the gums at their junction with the teeth."

Tanner says: "The existence of a blue, or slate-gray line around the edges of the gums is a pathognomonic symptom of the presence of lead in the system."

Niemeyer states that, "The gums are dark, almost slate-gray," in poisoning from lead. Thus, I might go on, adducing testimony on this point from numerous other recognized authorities but I deem this sufficient.

I have not the least shadow of a shade of a doubt that the disease, as I have met it in my county, and which I have endeavored to describe, is nothing more nor less than old-fashioned lead colic.

There is nothing *new* about it, in fact, it is almost "as old as the hills."

Believing it to be lead colic, I have treated it as such, and every one of my patients have recovered, without an exception, either young or old.

The treatment which was pursued in my cases was substantially the following: Opium in full doses, by the mouth, or morphia hypodermically was given to control pain, and repeated as often as there was a demand for it.

Active cathartics, sometimes the compound cathartic pill, and in other cases, a pill of calomel, jalap, aloes, colocynth and croton oil were given to keep the bowels open, and were followed whenever necessary, by epsom salts, most often, but sometimes by castor oil, The bowels were more readily moved after the patients were brought under the influence of opium.

Stimulating injections, anodyne injections, and simple warm water injections were resorted to as the cases seemed to require. Benefit was derived in a few instances from the gall of a beef, dissolved in warm water and given by enema. In some cases, the elixir of vitriol was used with good effects, in others, large doses of alum proved serviceable, and in others, again, the iodide of potassium seemed to be decidedly beneficial, in truth, the last named remedy was administered more generally than any other, except opium, and I believe, was of material service in eliminating the poison.

The warm water bath, the acidulated bath, as well as frequent sponging of the surface of the body, were resorted to in many cases, and afforded great comfort to the patient, if nothing more was accomplished thereby.

Large warm poultices applied over the whole abdomen appeared to alleviate pain in many instances.

I allowed them all, the free use of acidulated drinks, and as much nutritious food, of the more digestible kinds, as they were disposed to take.

Stimulants, and tonics were given in many of the cases throughout the attack, and during convalescence, and for some time after, iron, quinine, and bark, or gentian, together with brandy or whiskey, were given to build up and fortify the system.

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THE EFFECTS OF THE INTERNAL ADMINISTRATION OF QUININE UPON THE EAR.

By D. B. St. John Roosa, M. D., of New York.

For a long time there has been a belief among the laity, a belief that is shunned by some medical men, that the internal use of quinine sometimes seriously and permanently injures the power of hearing. It cannot be said, however, that this belief is an established fact. Indeed, it is still, I think, an open question, whether the internal use of quinine ever permanently injures the ear. I am free to say at the outset, that my conviction is, that the evidence leans that way, but I do not consider that we are able, as yet, to decide the question.

It is with a view of collecting testimony on this point, that I address this communication to my medical brethren of the Southern States. The medical men of the South have, perhaps, as good opportunities as any observers in the world for settling this question, for, as I am told, the malarial fevers of that region often require doses of quinine that are seldom or never given in the Northern States. I will first give a sketch of what is known of the effects of quinine upon the ear, and then submit a simple plan for observations on this subject.

In 1870* I saw a case of impacted cerumen and inflammation of the external and middle ear in a medical man, when the use of quinine seemed to be the exciting cause of the inflammatory trouble. The evidence that quinine in this case was a cause of inflammatory disease of the ear, has always seemed tolerably strong to me. I may refer the reader to page 155 of my text book, for a full account of this case.

Dr. C. E. Hackley, Physician to the New York Hospital, gave me a verbal report of cases of aural inflammation, occurring in his practice at the Hospital, which seemed to be the result of the internal administration of quinine.

I have been obliged to reject all the testimony I have yet gathered from patients suffering from chronic aural disease, as to the influence of quinine in producing *permanent* trouble, as worthless; of course, no one denies that a temporary tinnitus and impairment of hearing, are almost constant results from the use of the drug in question.

My friend, Dr. C. Duffy,† of Newbern, N. C., also came to a negative conclusion after some exact observations on this point. All that I can state after years of careful consideration as to whether quinine does or does not permanently injure the hearing power in some cases, is, that I believe that the hyperæmia, of the auditory apparatus which experiment has shown us, is often caused by the administration of quinine, is dangerous to the ear that is already in a state of congestion.

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*Transactions of the American Otological Society, 1872, p. 57.
†American Journal Medical Sciences, p. 88, October, 1871.

I have no positive opinion on the question, as to whether ears previously healthy may be permanently injured by cinchonism.

The experiments that have, as I think, established the fact, that the internal use of quinine does often produce hyperæmia of the ear, were made by Professor William A. Hammond and myself.

Dr. Hammond's experiments made upon dogs, may be found in the Psychological and Medico Legal Journal, for October, 1874.

My own experiments consisted in the administration of the sulphate of quinine in ten and fifteen grain doses to male adults, and in the examination of the drum heads when the subjective effects of the drug were observed.

Hyperæmia of the membrana tympani was seen in all the cases but one ; and in one case there was also hyperæmia of the auricles, and of the ocular conjunctivæ. There were five observations, and in one case no effect whatever was detected. This subject was anæmic, and accustomed to take quinine, while the others were not.*

The hyperæmia and tinnitus in those five cases were but temporary. Having thus cleared the way for the object of my inquiry, I beg my readers to assist me in further investigations upon this subject.

As a preliminary to all investigation in this department, the investigator must know how to examine and recognize the details of the membrana tympani. With a good otoscope—to be obtained of instrument makers for about $2 50, and a set of aural specula any intelligent practitioner, not already in possession of this skill, may be able to examine a drum-head in a very few trials. In case of need, any mirror or bit of one, may be used as a reflector, while all the skill required is to place the speculum gently and firmly on the auditory canal, and while holding it in position to throw the light from a white wall, a clear or cloudless sky, a lighted candle or lamp, or gas burner *into* the canal, and *upon* the drum-head. The observations should be made upon persons whose hearing on each side has been accurately tested by the watch and conversation. If their is any impairment of hearing on either side, the subject should be rejected as not a proper one for the tests. If there is a history of previously existing loss of hearing power, this I think, should also exclude the case. The drum-heads should be examined and their appearance, especially as to hyperæmia carefully recorded.

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*Transactions American Otological Society, 1875.

During the administration of the quinine, the hearing power should often be noticed and the drum-heads examined. Then in 10, 30, and, if possible, 60 and 90 days after the use of quinine has been given up, the hearing power, the appearance of the drum-heads, the subjective symptoms, should be carefully noted and inquired into and recorded, of course, it is assumed that these observations will be made upon patients for whom it is necessary to prescribe quinine for the relief or cure of disease, and not upon physiological subjects. A hundred such observations, made by different observers, will go a part, if not all the way, toward settling the question as to whether quinine administered internally, does permanently impair the hearing and cause lasting subjective sensations referred to the ear. The writer will thankfully acknowledge any exact information bearing upon this subject.

CLINICAL REPORTS.

GUN-SHOT WOUND OF THE COCCYX, PERFORATING THE RECTUM.

By W. J. H. Bellamy, M. D., Wilmington, N. C.

Gun-shot wounds and fractures of the coccyx being uncommon, and in fact, rare, I am induced to report the following case, occurring in this city on last Christmas morning.

T. W., aged thirteen years was shot, by a neighbor accidentally, the gun having been loaded, as was stated, with powder and paper wadding only, but tightly rammed in the barrel. The distance was but seven or eight feet. The load entered the coccyx near the sacro-coccygeal articulation, a little to the right of the mesial line, and passed on through the walls of the rectum. The size of the wound was at least, that of a circle whose diameter is two and a half inches. I saw him shortly after the occurrence, and with my index finger thoroughly examined the wound.

Fragments of bone still retained in their nearly normal situation by their ligamentous attachments were easily felt, and as the finger was withdrawn, bubbles of the peculiar flatus from the rectum escaped, as was evinced not only by their appearance but by the peculiar odor. Carbolic acid and whiskey were applied as a dressing to the wound. Paregoric for the relief of pain to be given *pro re nata*; a dose of castor oil was prescribed to be given next morning.

December 26th. Patient is restless, and suffering with pain and uneasiness in the hypogastric region, worse during the act of micturition—bowels have moved freely—fœces are seen oozing through the wound. The patient lays upon his abdomen and complains of the position being tiresome. Prescribed flax seed tea and nitre, with flannels wrung out of tea made with hops and vinegar to be applied to hypo-gastrium. Paregoric in anodyne doses and carbolic acid and whiskey dressing continued, and great cleanliness enjoined.

Day by day, during the progress of healing by healthy granulations, there could be seen feculent matter, with its characteristic odor, oozing through the wound. Treatment similar to that mentioned was continued, and on the 10th of this month (February) complete and firm cicatrization of the wound throughout its whole extent had taken place. The patient has daily alvine evacuations and urinates without any difficulty, says he feels as well as he ever did.

From the "Medical and Surgical History of the War," from the Surgeon General's office, Washington, we observe that there were seventeen cases reported, six or 35.3 per cent. were fatal. In twelve with five deaths, the coccyx was the only bone involved. In four of the seventeen cases, the rectum was penetrated. In three of these four cases, the bladder was also injured."

Andouillé (Mém de l'Acad. de Chir.) states, that in Flanders, at the battle of Rancon, a Hanoverian soldier was struck by a musket ball, which entered at the junction of the pubis with the ilium, traversed obliquely the cavity of the pelvis, perforated the rectum, and destroyed the lower part of the sacrum and part of the coccyx. These are the only well authenticated cases reported that I am aware of. In the case I have reported, I certainly did not expect such favorable results in comparatively so short a time. I had apprehensions lest I would be troubled with a tedious fistula. In such cases very good results may be expected from the use of a rectal tube to convey liquid fœces and to prevent accumulations in the rectum.

A CASE OF HOUR-GLASS CONTRACTION OF THE UTERUS BEFORE THE EXPULSION OF THE FŒTUS.

By A. H. Goelet, M. D., New York.

On the 24th of July last, I was called to Mrs. R., who had engaged me to attend her in her third confinement, which she expected about the last of September. She was consequently about $6\frac{1}{2}$ months advanced. I found her in premature labor, the os fully dilated, and the membranes still intact, but could detect no presenting part. The pains being very feeble and infrequent, 25 gtt. Squibb's fluid extract of ergot was given. As the pains increased there was some hemorrhage, and I ruptured the membranes to expedite the labor. An enormous quantity of amniotic fluid was discharged. Another examination at this time found the os in the same condition as before, and it was not until the whole hand was introduced into the vagina that the uterus was discovered to be contracted in the centre, the fœtus above the constriction, and a finger projecting through. This was a condition I never met with before, and I was in some doubt at first as to the proper course to pursue. But, since the patient was in danger from the hemorrhage which still continued, the indication was clearly the immediate extraction of the contents of the uterus. With great difficulty one finger was forced through the constriction, then another, and after considerable search a foot was found, but having only two fingers with which to grasp it, very little traction could be used. Finally, one foot (for the other could not be found) was dragged down and out of the vulva, but when the breech of the child presented against the constriction it required all the force that could be exerted with both hands, to bring it through, and the same was the case as the shoulders and head came down in succession. The delivery of the placenta, though less difficult, required force.

So far, as I am informed, this is the first case of the kind on record. But if this report should meet the eyes of any one who has seen or heard of any such condition before, I should be pleased to hear from him through this Journal.

SELECTED PAPERS.

FOREIGN BODIES IN THE ŒSOPHAGUS.

The following is the substance of a paper read by Professor B. von Langenbeck, to the Berlin Medical Society on "Foreign Bodies in the Œsophagus and Œsophagotomy." After indicating the usual places where foreign bodies are detained in the œsophagus, the Professor went on to say (*Berliner Klin. Woch.*, December 17 and 24) that he had met with three cases in which voluminous bodies detained in the pharynx by compressing the epiglottis against the rima glotidis threatened to produce immediate suffocation. The first of these was produced in the lecturer's presence, by a boy playing with another at catching a small apple thrown into his mouth. After succeeding several times, he suddenly fell on the floor with widely-opened mouth and a blue-colored face. Fortunately, it was found that the apple could be extracted by introducing the forefinger beside it. The second case occurred in the person of a very robust gentleman, who came to consult the lecturer concerning a hernia. Lying down on the sofa in order that it might be examined he suddenly became lifeless and blue in the face. On the fore-finger being introduced, a complete set of false teeth was withdrawn, the pulse and respiration, however, not returning until some seconds afterwards. Dieffenbach relates an entirely similar case. In the third instance, a lady, about to undergo amputation of the breast, exhibited at the very commencement of the administration of chloroform laborious stertorous breathing and a dark blue-color of the face. The finger introduced to draw the tongue forwards, detected and withdrew a set of false teeth. In other cases of this kind the patients do not always escape so easily; and it is very desirable that dentists should caution those to whom they supply teeth in order to prevent these accidents. Surgeons, too, before administering chloroform to elderly people, should ascertain with certainty the existence of false teeth, and insist upon their removal. In the removal of large foreign bodies the finger is the instrument to be resorted to before all others; and if they are too firmly fixed to be removed by it, then forceps or levers should be used. Tracheotomy is always too late in such cases. When, also, small-pointed foreign bodies—as needles, fish-bones, etc.—are detained in the pharynx, and especially in the sacculi formed by the ligamenta glosso-epiglottica, the finger should never be omitted to be introduced, in the hope of bringing the body into the mouth, or at all events to ascertain its exact position before employing the forceps.

When a foreign body of some size, as a large piece of meat, hard dumpling, potato, etc., passes through the pharynx, it not infrequently becomes detained in the œsophagus opposite the cricoid cartilage, and by pressure on the larynx or trachea causes great difficulty of respiration. Its position is easily ascertained by the projection it causes on the left side of the throat, but its removal is often very troublesome owing to the spasmodic contraction of the œsophagus which takes place above and below the foreign body. Forcibly thrusting it down cannot be too strongly deprecated, as injury to the œsophagus cannot be avoided with certainty. A peasant applied to the lecturer for relief, having thirty hours before, attempted to swallow a huge piece of sinewy meat, which, being retained, almost induced suffocation. Repeated attempts were made to remove the foreign body by means of a slightly curved, strong forceps, but it proved immovable, only some of the fleshy fibres coming away. Œsophagotomy was contemplated, as during the attempts at removal the difficulty of respiration was so greatly increased ; but the projecting tumor having been seized by the fingers in the neck, raised from the larynx and compressed for some minutes, the respiration became much more free. The foreign body, although not moving from the spot, had assumed through this manipulation, a more elongated form, and was removed by means of the forceps with some exertion of force. Another man applied on account of the obstruction to respiration and swallowing caused by a pretty large piece of tough meat which had for twenty-four hours obstructed the same part of the œsophagus. Violent retching, caused by tickling the fauces and attempts with the forceps to withdraw or thrust it down, failed to dislodge the body, which was placed as in a diverticulum of the left side of the œsophagus. The tumor which it formed in the neck was then seized with the fingers and squeezed so powerfully that the body slid down into the stomach. Dupuytren dealt with a potato in the same way, which had resisted all attempts to withdraw it or force it into the stomach.

When the position of the foreign body is not indicated by its projection in the neck, we must bear in mind that the indications furnished by the patients themselves are very deceptive. Oftentimes they are unable to denote its locality, and sometimes assign one that is far distant from the real one. Thus, a woman in whom a set a teeth was lodged opposite the cricoid indicated the cardia, and a man referred the obstruction caused by a piece of bone to the cervical portion of the œsophagus, when it really existed in the thoracic portion. Catheterism of the œsophagus may therefore be required to ascertain the situation of the body. The general and almost traditional practice of employing the probang, either for the withdrawal or for the thrusting down of the foreign body, cannot be too earnestly deprecated. A more irrational practice can scarcely be imagined, and no other instrument has done so much mischief in proportion to the number of cases in which it has been employed. By it we are able to ascertain neither the situation nor the condition of the foreign body; and, in place of its withdrawal or propulsion, it sometimes becomes only forced deeper into the œsophagus, and even (as in two cases which the lecturer has met with) be thrust through the wall of the œsophagus into the mediastinum. When soft bodies obstruct the œsophagus, the forcing of which into the stomach is desirable, the probang may be used; but in all cases when the condition and position of these are unknown, or their extraction seems possible, catheterism must first be performed. For this purpose Professor von Langenbeck uses a whalebone staff, to the lower end of which is attached a smooth polished iron ball. This, when well oiled, slides readily down the œsophagus by its own weight, is easily movable to and fro, and enables us to detect with certainty hard bodies, such as coins, needles, and pieces of bone. If the object is to force into the stomach a harmless substance, the nature of which is known, he employs an elastic œsophageal sound; this acts upon the foreign body as efficaciously as the probang, but slides down the œsophagus far more easily, and renders injury much less possible. Foreign bodies which may wound the œsophagus, or become dangerous in the intestinal canal—such as bone, fragments of glass, coins, needles, etc.,—should, in Professor von Langenbeck's opinion, be always extracted, their extraction being a far more certain and less dangerous procedure than forcing them into the stomach. In a great number of such operations he has never met with any accident. The instrument which he exclusively employs for this purpose is Von Graefe's coin-extractor. This passes with facility, and without any injury, into the œsophagus beside the foreign body, and during its withdrawal seizes it with a certainty that leaves nothing to be desired. Prior to its introduction, some oil should be introduced into the œsophagus, and then the end of the instrument should be guided by the left forefinger over the roof of the tongue and epiglottis against the back of the pharynx, and thence into the tube. On withdrawing it very carefully, if the least resistance is encountered we must desist, and move it gently to and fro in order to disengage it from any possible entanglement in the mucous membrane. When the instrument with the foreign body has arrived opposite the cricoid cartilage, difficulty in completing the extraction is caused by the cartilage springing backwards; but this may be obviated by pressing the end of the instrument, which has now become visible, against the posterior wall of the pharynx. When the isthmus fauciam has been reached, we should always, and especially with restless children, have the left forefinger in readiness, in order to seize hold of the foreign body, which might otherwise escape. A pair of firmly grasping pharyngeal forceps, and this coin-extractor, constitute all the apparatus required. There is, however, one inconvenience attending the coin-extractor that must be noticed—viz : when the foreign body becomes so firmly wedged into the extractor that this cannot be loosened from it and withdrawn. Professer Adelmann relates a case in which the extractor, thus embracing the foreign body, could not be removed during two days. In the case of a girl who had swallowed a shawl-pin, which occurred to the lecturer, its position at the lower end of the œsophagus having been detected by means of the sound armed with the iron knob, it was seized by the coin-extractor. So firmly, however, had it penetrated the œsophagus that it could not be withdrawn ; and, after repeated efforts, when the attempt was abandoned, the instrument could not be separated from the pin until after half an hour, when the pin slipped into the stomach. Bloody stools followed, and the patient complained of great pain in the stomach for a month after the accident, but the pin has never been found.

Casting one's eye over the statistics, it would be concluded that the passage of foreign bodies into the œsophagus, is a very dangerous occurrence; for of the 314 cases collected by Adelmann, 100 proved fatal. But the proportion of fatal cases is far less than this, for the great majority of cases, when the foreign body is easily extracted or passes into the stomach, are never published at all. In Professor Langenbeck's thirty-four years' practice he has had a very great number of these cases, and has never met with a fatal occurrence. Pieces of money can always be removed, and some of the pieces of bone slip into the stomach as soon as they have been dislodged by the extractor; but the great majority of flat and pointed pieces of bone are removed. In the two fatal cases of perforation of the œsophagus related by Professor Busch, the sponge-probang had been employed, and the foreign body could not be detected. However, from this statistic the conclusion is to be drawn that if the foreign bodies be not promptly removed, and if unsuitable and violent manipulations are employed, they may seriously endanger life. Above all things, it is important that the body be removed as soon as possible, and that the practitioner at once proceeds with decision.

When the removal cannot be accomplished, and the nature of the body does not admit of its being thrust into the stomach, when the cervical œsophagus is the part of the tube concerned, we should perform œsophagotomy. It is a comparatively rare operation, for, according to König, from the time of its first performance by Goursault in 1738 to 1872, it has only been executed twenty-six times for the removal of foreign bodies. Its indication has been generally believed only rarely to occur, while its danger and difficulty have been exaggerated; and an examination of recorded cases of foreign bodies in the œsophagus shows that it should have been performed much more frequently, and that, without doubt, many lives might have been saved by it. The twenty-six operations referred to by König, and two now related by the lecturer, were followed by twenty-three recoveries and five deaths, some of the latter being due to the too prolonged residence of the body; so that the operation must be regarded as one attended with very little danger. Almost all living surgeons agree that the mode of making the incisions recommended by Guattani is the best, the skin on the left side of the neck being divided from the middle of the thyroid cartilage to the anterior edge of the sterno-cleido-mastoid, and to about five centimetres above the maunbrium sterni. After the superficial fascia has been divided, the sterno-cleido is drawn outwards and backwards by means of double hooks, and the common carotid then becomes visible through the middle cervical fascia. The fascia is to be divided in the direction of the long axis of the wound, and drawn outwards and backwards by means of strong hooks, the carotid being kept out of the operation-field. It must not be forgotten that this artery lies more superficially than the œsophagus, and that the latter only becomes visible after the deep cervical fascia has been divided. This is done at the outer edge of the sterno-thyroid muscle, after having drawn the larynx by means of a hook to the right side. The muscle being now drawn towards the median line, the œsophagus becomes visible. Before opening it an œsophageal sound, made of gum-elastic or pliable metal, should be introduced for the purpose of projecting the œsophagus more to the left, and rendering its opening more easy and certain. The separation of the fascia in order to expose the œsophagus is best accomplished by raising it by means of two hook-forceps and dividing it between them, allowing the knife to act more by its pressure, thus avoiding injury to the inferior thyroid artery and inferior laryngeal nerve. Injury to the recurrent nerve is not much to be feared, as this passes upwards between the trachea and œsophagus, and is with the former organ drawn towards the right; it is only in question when a foreign body of large circumference thrusts the œsophagus far towards the left. The nearer an operation approaches important organs, the more must it assume the character of a delicate anatomical dissection; and in order to avoid injuring important vessels, it is highly desirable to separate the tissues as much as possible by means of the fingers or blunt instruments. When the foreign body does not project the œsophagus, and cannot be felt externally, the passage of an œsophageal sound by the mouth very much facilitates the operation. One circumstance may render the access to the œsophagus exceedingly difficult, and is of the more importance, inasmuch as it is not noticed in any of the descriptions of the operation. This is the tumefaction of the thyroid gland. If a large foreign body be detained for several days opposite the cricoid cartilage, causing difficulty of respiration by pressure on the larynx, swelling of the thyroid due to a stasis of the blood in the veins is always present. The tumefied gland lies so much over the œsophagus that this may be entirely covered by it; and in order that the gland may be raised from the œsophagus its enveloping fascia must be divided.

Professor von Langenbeck terminates his communication by the narration of two cases in which he performed œsophagotomy with success for the removal of false teeth.—*Medical Times and Gazette.*

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IMPORTANCE OF THE ARREST OF EPILEPTIC AURA—MEANS FOR PREVENTING ATTACKS OF EPILEPSY.

By C. E. Brown Séquard, M. D.

Abstract of a Lecture delivered at Bellevue Hospital Medical College, December 15, 1877.

I pass now to another point. I said yesterday that there is very frequently an *aura* in disease of the brain causing convulsions. It is very important indeed to examine with reference to this point; for if you find an *aura*, it will lead to the use of a series of means which may stop an attack of epilepsy. If an attack of epilepsy can be arrested, we do more than simply arrest that attack; for during an attack of epilepsy, changes occur which prepare the brain for future attacks; so, if one attack can be arrested, you may, perhaps, stop a generation of attacks. It is important, therefore, to prevent an attack of epilepsy. Now, with reference to the means of preventing these attacks. Means for preventing the occurrence of attacks of epilepsy were resorted to centuries and centuries ago. Galen insisted particularly upon the importance of ligaturing the limbs for this purpose. Suppose, for instance, there is an aura starting from the finger—a peculiar sensation or muscular spasm: Galen, and a great many physicians since his day, and even in our times, insisted upon the application of a ligature to the arm, with a view of preventing the passage of some influence from the extremity to the brain. In reality, we succeed very frequently, by the application of a ligature to the extremity, when the aura is there, in arresting an epileptic attack; but it is not because we prevent something from going to the brain, but it is because we send something to the brain, and that something is an irritation which acts so as to arrest the irritation already there, and which, if undisturbed, would produce the convulsion. It is the same as that which occurs in diseases of the spinal cord, in which, by taking hold of the big toe, you arrest completely, in most cases at least, convulsions occurring in the lower limbs: For example, in cases of spinal epilepsy, the convulsions may be most violent, may last all day, and may recur upon the least touch of any part of the skin of the lower extremities ; in those cases it is not rare at all, especially in certain forms of the disease, that drawing upon the big toe brings about a relaxation of the muscles and ends the convulsions. An arrest of the morbid activity in the cells in the spinal cord is produced by irritation of the nerves which go to the big toe, and that arrest remains sometimes for hours, and sometimes for days ; but you can reproduce the same phenomena in the same patient. Whenever the convulsions exist, you can witness the influence averted by this irritation.

As soon as I was possessed of the idea that it was through irritation exerted by the ligation, that an attack of epilepsy was cut short, I tried and found that other irritants applied to the skin produced the same effect ; for example, such as extreme cold, great heat, pinching the part ; in short, any irritation of the nerves in the region where the aura commences may be sufficient to arrest an attack. In fact the patients themselves, if they have strength of will sufficient, when upon the point of having an epileptic seizure, can, by moving the limb rapidly, rotating the arm, etc., perhaps stop an attack. Any kind of irritation from the periphery may act upon the brain and arrest the morbid activity of the cells, and that irritation can succeed even when applied upon the other side where the aura exists.

As regards other forms, if the aura starts from the stomach, anything which irritates the stomach, powerfully, as a violent emetic, will save the patient from an attack of epilepsy. Certain other means may also succeed, as acting upon the bowels by an enema that will produce a rapid and considerable action of the muscles. Pressure upon the bowels may bring about the same result, if the sensation starts from that region. A galvanic shock, on the contrary, will produce an attack in many cases. If the patient has simply a vague sensation of disturbance without any distinct place from which the aura arises, any means of producing irritation of the skin behind the ears or between the shoulder-blades, may be of some service, such as the application of ice, a sharp blow from th hand, galvanic shock, etc. Any medicine which acts with great power upon the stomach or upon the bowels, or which acts with great power upon the nervous system, may be of service in these cases.

MEDICINAL AGENT FOR THE ARREST OF ATTACKS OF EPILEPSY.

A common remedy which is employed with some benefit consists of three or four grains of the sesqui-carbonate of ammonia in a drachm or half-ounce of tincture of columbo, or gentian, or rhubarb; it is the alcohol chiefly that acts. Taken without dilution, it is rather strong, and therefore a trifling quantity of water may be added. It should be carried in the pocket, so that it can be used at the shortest warning. Running, jumping, anything and everything that produces a change in the circulation and respiration, may be of service for the arrest of an attack of epilepsy. You may not know what means will operate best upon a patient; but, recommending such means as have been mentioned, he may try one after another until he finds that which succeeds best in his individual case. In that manner, you can, perhaps, save the patient from an attack.

COMBINATION OF THREE MEDICINES.

The combination of three medicines I have found has considerable more power in controlling epilepsy than the use of one alone or of two combined. If you employ the bromide of potassium, you must employ with it the bromide of ammonium and the iodide of potassium or ammonia. A combination of these three salts acts with far greater power than when either one is used alone. It is essential always to add the bromide of ammonium if the other bromides are employed. In these cases it is also essential to employ some means of counter-irritation at the base of the brain; or, in cases of distinct aura, some means of counter-irritation at the place where the aura starts. In those cases in which the aura starts in the finger, I have succeeded most wonderfully in controlling the attack by the application of a circular blister in the shape of a ligature to the finger itself. There is, therefore, a series of means which can prove successful in preventing attacks in these cases. As I said yesterday, if we can do so much in the way of controlling attacks of epilepsy, why should we not be able to do the same against paralysis, as epilepsy and paralysis are in many respects alike in their mode of production.—*Medical Record*, *No.* 382.

CORRESPONDENCE.

OUR NEW YORK LETTER.

15, West Twenty-Sixth Street,
New York, February 26th, 1878.

The sessions of the Colleges are drawing to a close, and before this letter is presented to your readers, more than four hundred new sheepskins, issued in New York alone, will be certifying to the world that their respective owners are fully equipped with all the science and arts of medicine.

The bare mention of this fact carries with it a trenchant commentary, for we all know how impossible it is that young men, some even without the elements of an English education, shall in two years have possessed themselves of the knowledge and skill to which the professional signatures bear witness. And yet who shall provide a remedy against this regular "vernal fraud upon the public." The facility with which charters are multiplied; the ambition of practitioners to have their names associated with collegiate chairs, and the attractive manner in which professional title and social position are held out to young men, without reference to their qualifications, will always keep the benches full, and the applauding people in jeopardy of life and limb. Nothing is more inimical to the cure of this evil in America, than the unfortunate rivalry between the various colleges, which extends in some, and I believe I am credibly informed, to the admission of more than forty per cent. of the annual classes to beneficiary membership. And this system of the facile creation of M. D's., is not without supporters even among medical journalists of high position and attainments.

Fortunately, in North Carolina, you have a State Board of Examiners which can be made a partial bulwark against the evil, provided the examinations are conducted in the full intent of the law, and are not hurried over and completed, and the seal of approval set upon the applicant before this competency is satisfactorily ascertained.

On February 22d, the Society of the Alumni of the University of New York, a sort of *dilletanti* club, held its annual re-union, and gorged with one of Delmonico's best dinners. Nothing notable was said either medically, legally, or theologically as might have been looked for from the Doctors, Lawyers and Dominies present, who cracked nuts and decorous jokes over the Falernian from the caterer's cellar.

The proceedings of the Societies for February, have been in a great measure devoted to eulogies upon the life and character of Dr. Peaslee.

At the Academy of Medicine, Dr. Fordyce Barker, for many years in intimate relation with Dr. Peaslee, delivered the memorial address by appointment. The paper was very full in detail, and graceful and scholarly in diction. It will be published.

Dr. Emmet's address on the same subject at the January meeting of the Medical Society of the county of New York, gave a full analysis of Dr. Peaslee's character, and spoke of overwork as the cause of his death.

Dr. J. A. Wyeth read a beautiful tribute to the martyrs of Fernandina, Drs. J. C. Herndon and Preston Wellford, who died within two weeks after entering upon their self-imposed duty, during the terrible epidemic of yellow fever last year.

Dr. J. W. S. Arnold's paper presented the results of an "Experimental Inquiry into the muscular element of the first sound of the heart," being amply illustrated by photographic enlargements of the tracings, obtained by Marey's instruments.

It will not be forgotten what great contrariety of opinion has existed in reference to the factors of the first sound. The impulse of the apex against the thoracic walls, the closure and tension of the tricuspid valves, the opening of the semilunar valves, the friction of the blood against the walls and fleshy columns, the impact of the ventricular blood against that in the aorta, and the muscular *bruit* itself, have all been acknowledged collectively, and each rejected in its turn, as having an agency in the systolic sound. Particularly the muscular element has been denied by many physiologists, but the results of Dr. Arnold's experiments enable us to doubt it no longer.

They were conducted in a most patient and critical way upon living horses and other smaller animals. Rods or small India rubber bags, *ampoules*, were introduced through the jugular vein into auricle and ventricle, and other ingenious devices employed to eliminate the several factors in their turn.

But the *experimenta crucis* were with the heart removed from the body while still pulsating. Here the blood is absent; the thoracic impulse impossible, and only two sources remain from which a systolic sound could issue, viz: the movements of the valves and the muscular *bruit* itself. The first was eliminated by pinning the valves back and by division of the *chordæ tendineæ*, leaving only the muscular walls to furnish what might be heard. Careful auscultation of the still pulsating heart disclosed a distinct and well recognized muscular susurrus uncomplicated by the other noises which go to make up the complete systolic sound of a heart in situ.

Dr. Arnold is eminent as a practical physiologist, a Professor in the University of New York, under 40 years of age, and originally from Charleston, S. C.

At the stated meeting of the County Medical Society, February 25th, a committee was appointed to investigate the abuses of the Medical Charities of the city. It appears that the profession is grossly imposed on here by people who are able to pay, as it is with you, and more than one Medical Provident Association has been formed to counteract the evil.

Dr. J. C. Davis read an able and lucid paper on Hepatic Abscess, which a long residence in Zacaticas, Mexico, has enabled him to become perfectly familiar with. The practical points of interest to be abstracted for your readers are:—that it may arise from two sources, viz: hepatitis produced by whatever cause, and emboli or septic particles conveyed to and entrapped in the terminals of the portal circulation. High temperature is denied as predisposing to it, but rather it is to be sought in the habitual errors of diet and the indolence which keep the liver continually gorged in tropical regions. No positive indications for diagnosis were given. Pain and pouting led to suspicion of abscess when other troubles can be excluded; the rigidity of the *rectus abdominis* was not referred to; the explorating use of the trocar was highly recommended, as almost free from danger (only one death reported as following it in many cases), and it is regarded as, at least, an infinite improvement on the old plan of waiting. The special point in the treatment was the early and repeated (at intervals of a few days) use of the aspirator, and washing out the sac of the abscess with warm water, followed by solutions of carbolic acid, or iodine (Tr. iodine co. ℥ ij aquæ ℥ x) to be retained five or ten minutes. The punctures to be made in the intercostal spaces, preferably the 9th, a little posterior to a line drawn vertically down from the centre of the right axilla. It is safer at that point, as the liver is in close apposition with the diaphragm, and no infiltration can take place between the two. Drainage tubes are often to be used, but do without them if possible. The prognosis, of course, is always grave, never better than doubtful, but it would seem that the experience of Dr. Davis and the Mexican Surgeons Hernenez and Condon enable us to take a more hopeful view than formerly. Under the old plans of Macnamara, Murchison, Budd, Frerichs and others, in which waiting on nature, making efforts to induce adhesions by punctures, cautery and sewing liver capsule to abdominal walls were the main features, the mortality was over 75 per cent. ; whereas under the exploratory methods, with prompt evacuation, even if the abscess has to be sought for by several punctures with the needle, the percentage of recoveries is much greater. Thus, Condon, in 12 operations had 7 successes, or nearly 60 per cent., and the lecturer, Dr. Davis, in 26 operated on, cured 12, nearly 50 per cent. This hasty abstract does not convey an idea of the literary research, the ability and absorbing interest the paper evinced.

Dr. Jacobi presented the first *fac similes* of the catalogue of the National Medical Library, and called attention to the fact that the committee of Congress to which had been referred the question of an appropriation to continue the publication had reported adversely. A committee of twenty-five of the most prominent members was appointed to bring the matter forcibly before Congress, as one of paramount importance. I am glad to note that the JOURNAL has already taking precedence in pointing out the value of this undertaking not only to the Medical profession, but to science generally, and the whole people of the United States, and it is to be hoped an ample appropriation will be secured.

The Societies have latterly had occasion to reprove some of their most eminent members for advertising themselves, as alleged, under the guise of giving certificates, to be published in the secular prints, bearing testimony to the efficacy of certain widely sold mineral waters, conspicuously the Hunyadi Janos. No one really believes they intended to advertise, but suppose if any poor devil should now sign his name to a card asserting the eccoprotic power of podophyllin, he would be made to feel the rod which has only been shaken at the Hunyadi Janos men. Our code of ethics is fearfully unequal in its operation. One of the privileged, occupying a professorship (perhaps purchased) in a College, may lawfully by an assiduous distribution of the annual catalogue (30,000 copies), tell the world that he fills the chair on diseases of the umbilicus, and resides near the Navel Academy. But no practitioner outside of a college can send a card to his next-door neighbor to say that he has given up general practice, and for the future shall only practice circumcision, without bringing down the Jovian bolts of the other preputialists.

The code should prevent the faculty men advertising their respective specialties and residences in the annual announcements, or lay the way to publicity equally open to all. It is all bosh to allege that the cases are different—every one knows that in the main, the Professors chairs are excellent stepping stones to practice through the advertising privileges carried with them.

The question will be a prominent one at the next meeting of the American Medical Association.

The February meeting of the Ophthalmological Society was made interesting by Dr. Prout, of Brooklyn, who exhibited the new German specula for examining the pharyngeal opening of the Eustachian tubes. They promise to be very useful in the hands of the trained specialist. Your correspondent had the pleasure of meeting there, Dr. George Graham, of Raleigh, to whom the staff at the New York Eye and Ear Infirmary is indebted for suggesting the use of balsam of copaiba in obstinate photophobia from corneitis and other causes. It is smeared on the brows and lids, and Dr. Oppenheimer, the curteous resident surgeon at the Infirmary, speaks highly of its efficacy as far as the experience yet goes.

Cannot Dr. Graham furnish your readers with the account of its use in his hands, and other contributions from the records of his large ophthalmological field?

Ophthalmologists residing in the South have facilities for making observations upon the refraction of eyes among negroes, not possessed among their northern brethren. Reliable data covering thousands of cases are sadly needed in contribution to the great question as to the influence of education in producing errors of refraction. The work is not apt to prove nice, but it is in the interest of science, and of course, will secure the necessary attention.

In this connection let me urge upon your best medical men a generous response to the inquiry proposed in this issue, by Dr. Roosa, into the effect of large doses of quinine upon the audition and the state of the drum membrane. The labor is not difficult, for after the observer has made himself familiar with physiological appearances, he can easily note abnormal departures.

All the apparatus requisite to the inquiry is a watch, a small ear speculum and a piece of looking glass. Diffused daylight, the sun or a kerosene lamp may be used as the source of illumination, the rays being projected into the ear by the mirror.

The American Gynæcological Society is a select body of men, limited in number, who set themselves up, as they may well be acknowledged to be, as the CORYPHEI in their line. It professes to admit no one to fellowship who is not already distinguished in gynæcology; and assumes the high role of "taking the initiative in giving tone and coloring to the progressive advance of science in obstetrics and gynæcology; to stamp with its approval all real merit and to extinguish sham." This is a royal assumption for a body so purely autochthonic, but when we are told that it embraces such names as Sims, Barker, Emmet, Thomas, Atlee, Howard, Battey, and the late Drs. Buckingham and Peaslee, we must concede what they claim.

It would be much better if their papers, the results of their own work were given to the profession through the regular periodicals, instead of being hidden away in a yearly tome of transactions which few can afford to purchase.

Your correspondent witnessed a late case of ovariotomy by Dr. Thomas. The practical details in the procedure may be useful to those who are interested in that line. It was at the Woman's Hospital, not in the main building, however, but in a small frame cottage on the grounds, to diminish the danger of septic influences. The temperature of the room (10x10) was about 80°. Woman on a narrow table, on her back, knees flexed, and legs and feet hanging down over the lower end, and supported on a chair. Six assistants, one for the ether, two for manipulating the abdomen and body, one having charge of the instruments, two for the carbolic sprays—besides two nurses for handing warm water to the operator to keep his hands clean. The instruments were scalpel, grooved-director, scissors, sounds, trocars, vulsella, needle carriers, needles, ligatures of plaited silk, silver sutures, &c., all kept in a shallow pan of carbolized water, in charge of an assistant who wore rubber gloves to preserve his hands from the caustic effects of the acid. Allis' inhaler was used. The incision seemed to be about 5 inches long, in the middle line, below the umbilicus. After the hemorrhage had ceased the peritoneum was opened upon a director, and the adhesions, which were extensive, broken up with sounds and the hand. When the multiple cysts were tapped with the trocars, the woman was rolled over on her side to allow the colloid contents to flow out. The tumor being reduced sufficiently in size was seized with the vulsella and withdrawn by traction and lateral motion. The pedicle which was very broad was first secured by a ligature, and afterwards included in Thomas' clamps which seem to fulfil the indication better than any other, grasping the mass and compressing it in a circular way like a ligature, and not mashing it out flat as other clamps do. It is, moreover, very light and easily manipulated.

A portion of the omentum, much thickened and inflamed, was ligated and excised, and the ligature of silk being cut off short the mass was returned into the abdomen without securing it in the wound as is Atlee's custom.

. The peritoneal cavity was carefully cleansed by sponges on staffs, and the incision closed by interrupted silver sutures, followed by the usual plaster and bandage. The tumor was of the left ovary, the right ovary was, contrary to the diagnosis, not involved, although such a diagnosis was perfectly warranted, as there had been no menstruation for several months.

The operation consumed about twenty minutes and during the entire time the carbolic sprays were kept actively at work in and about the wound. I am informed, on excellent authority, that this distinguished ovariotomist has operated nine times without a loss since the first of the current year.

At the meeting of the Obstetrical Society, February 19th, Dr. Blake exhibited an apparatus for the administration of nitrous oxide gas commingled with atmospheric air, which promises to be of great service in the use of this agent as a tonic in the place of oxygen gas, which many, whose experience with it has been large, declare has not met their expectations. Dr. Doremus says—the nitrous oxide is capable of furnishing a larger amount of active available oxygen to the system than pure oxygen gas itself. And when we consider the molecular constitution of nitrous oxide, with its loosely held atoms of oxygen, ready to be yielded up on the slightest demand, in the nascent state, we may fully understand the force of this eminent chemist's statement. Dr. Barker and others cited instances of its beneficial influence in anæmia and other adynamic conditions, and particulaly in collapse following post partum hemorrhage, the effect in all being very marked. In asphyxia a large field is open for its use. The dose as a tonic, for the present is estimated at about five gallons a day, slowly given. The immediate effect upon the blood is to impart to it a marked red, arterial appearance, but it should be diluted with a greater or less quantity of air to *obviate its anesthetic effects which are undesirable.* Should lividity or blueness of the surface occur it is because the gas has been given too freely, and requires dilution.

It produces a natural, sweet sleep which need not follow, however, for several hours, and the awaking is not as from a soporific narcotic. I would suggest that it furnishes the promise of great usefulness, in narcosis from opium, chloroform, hydrocyanic acid, &c., in threatened asphyxia from croup, diphtheria, asthenia, emphysema, in the resuscitation of the new born, and possibly in the treatment of diseases of suboxidation, as diabetes, lithuria, gout and their congeners.

This gas is far more easily obtained than oxygen, it being manufactured now by almost every dentist, even in country locations, and may be had in compressed form, keeping indefinitely, from Codman and Shurtleff, of Boston, Tiemann, of New York, White, of Philadelphia, and other surgical instrument makers.

The mouth piece should be constructed to graduate the admission of air during inhalation. In this connection I need only point out the superior and safe qualities of nitrous oxide in many details of minor surgery, used, of course, as an anaesthetic—hence undiluted.

DeR.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, February 15, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—Professor Peter has just been elected a member of the Academy of Medicine by a very decisive majority, having defeated Dr. Maurice-Raynaud the great champion of the cold water treatment of typhoid fever. The successful candidate commenced life as a "compositor," but in latter years he has greatly distinguished himself as a physician, and his election is generally regarded as a well-earned compliment. Although the defeated aspirant had fewer friends in the Academy, they made up in enthusiasm for the sparsity of their ballots, and they submitted with ill-concealed reluctance to the adverse decision which the count disclosed. I rather incline to the opinion that there was some partisanship in the antagonism which manifested itself to their favorite, for, although a physician of great ability and learning, his advocacy of the "Brand System" has attracted to him no little of the prejudice which has so liberally engendered here against that special mode of treatment.

Last year an exceedingly virulent epidemic of typhoid fever visited Paris, in connection with which there occurred a very exhaustive, and, at the same time, acrimonious discussion in regard to the alleged advantages of the "Brand System." It was universally agreed that the theory upon which this method of treatment is based is a fallacy, and that *heat* does not play so important a part in the clinical history of typhoid fever, as Liebermeister and his school here so positively asserted. The facts which have led to this coincidence of opinion are chiefly these, viz :

1st. The same parenchymatous degenerations are found connected with other diseases which are not invariably marked by a high temperature, and which only run a brief course. In peritonitis, pneumonia, pyæmia, acute atrophy of the liver, cerebro-spinal meningitis, and, in fact, in a majority of the diseases which are characterized by decided constitutional disturbances, and a special malignancy identical degenerations are found.

2d. Ulceration of the glands of Peyer is the rule in typhoid fever, whether the attack be a long or short one, and without regard to the degree of heat developed or the plan of treatment followed.

3d. There is no necessary and absolute relation between the degree of heat developed and the virulence of the disease itself. Some cases of typhoid fever terminate fatally without a concomitant development of pyrexia; while in many instances a persistent temperature of 104° is followed by results less serious in their nature than a temperature of 101°.

To a repudiation of the dogma upon which the advocates of the cold-bath so confidently rely, a large majority of the physicians of France have added an indiscriminate opposition to the "Brand System" in all of its details. They, in fact, have argued themselves into the belief that this plan of treatment necessarily prolongs the duration of the disease, intensifies its character, increases its complications and renders a recovery from it a matter of the purest accident and the greatest good luck. As a natural consequence, therefore, they have but little respect or affection for each of their countrymen as have adopted this "alien and senseless heresy," and they are not prepared to render them the fullest justice in a contest for academical honors.

This antagonism has been greatly intensified by certain statistics which were furnished during the controversy by the city of Lyons. In consequence of a debate which took place there on this subject, a number of questions relating to the origin, clinical history and proper treatment of typhoid fever were addressed to all of the physicians of the place, and their answers were then carefully collected and compared.

From the papers thus secured it appeared that from the middle of the year 1874 to the end of the year 1876, there occurred 750 cases of the disease; that of these cases 234 were treated by the "Brand System," 154 were treated by cold affusions and similar means, and 358 were treated by other methods than those into which cold water entered as an element; and that the mortality for the cases treated by cold baths was 9 per 100, for the cases treated by affusion, &c., 6 per 100, and for the cases treated by the "old methods," 5 per 100.

There was also established at the Hotel Dieu a special service, arranged so as to secure a most careful and vigorous application of the "Brand System" in order that its merits might be subjected to a veritable *experimentum crucis*. The result showed that out of the *fifty-two* cases which were treated in this ward, *nine* terminated fatally; while "extensive ulcerations of the glands of Peyer," were, as a general rule, revealed by the scalpel.

Dr. Maurice-Raynaud, who, as I have already indicated, is the most conspicuous champion of the cold bathing system that France has produced, while uniting with his confréres in a renunciation of the *theory* upon which Brand has based his system, claims for it much *practical* utility in the treatment of typhoid fever. He asserts that, although pyrexia is not the exclusive agent in the production of the changes which take place in the tissues, and while the ulcerations of the glands of Peyer remain the characteristic lesion under all circumstances, his experience justifies the following conclusions, viz: 1st. That cold baths, properly employed do not increase the tendency either to bronchitis, pneumonia, or intestinal hemorrhage, but on the contrary, under these complications more infrequent and less serious in their character. 2d. That although the duration of the disease is not abridged by this method of treatment, its intensity is modified and its fatality diminished. As regards the statistics from Lyons, he says that the recorded percentage of *five* deaths in the *hundred* cases treated by the "old methods," was due to some lucky chance and cannot be taken as a proper standard of comparison, since all other experience proves that a per centage of *twenty* deaths in the *hundred* cases is the rule in this regard.

He also establishes the testimony of the physician who had charge of the special ward above referred to, that only the most desperate cases were confided to him; that the percentage of mortality was really 16 in 100, notwithstanding the especial virulence of the epidemic encountered; and that the mortality in the entire hospital, under the "Brand System," was 12.47 per 100 during the year 1874, 18.05 per 100 for the year 1875, and 18.18 per 100 for the year 1876, although only those persons most desperately attacked were subjected to this mode of treatment. With reference to his own experience, he says that, during the year 1873 he treated at the Hospital Lariboisière 30 typhoid fever cases by the "old methods," and had a death-rate of 26.06 per 100, and since then he has treated 117 cases—many of which were exceedingly virulent—by cold-baths, and has lost but sixteen of the entire number or 14 per 100.

In view of these facts, and also in consideration of the greater comfort which is secured to those who suffer with the disease, he unhesitatingly advocates the "Brand System," and declares that it gives results far superior to those of any other plan of treatment·

Without attempting to decide this controversy, I cannot help saying that, in my judgment, the truth lies mid-way between the two extremes of opinion.

There are, undoubtedly, cases in which cold-baths can be employed with advantage; while there are others—and the proportion is a large one—in which a recourse to them is fraught with extreme peril. Whilst according to this method of treatment all the advantages which can possibly accrue from a reduction of temperature in typhoid fever, I can but remember that *pyrexia* is after all but a *symptom*, and that in attempting to combat it, the *disease* itself may be neglected or even intensified and complicated. In a considerable number of typhoid patients the tendency is to *syncope* and death occurs from *asthenia*. When a life is thus staked upon the uncertain efforts of an enervated heart, the slightest movement or exertion is dangerous, and the very manipulations and changes of position incident to this special mode of treatment, are sources of additional peril, and should consequently be avoided.

For one also I should never think of invoking the "Brand System" when dealing with patients whose lungs are profoundly congested or skins unduly sensitive or secernant, or kidneys much engorged and desquamative, or in connection with whom a decided tendency to collapse manifests itself.

In this connection, it seems appropriate to mention that M. Feltz has recently communicated to the Academy some experiments, according to which, a figurative ferment exists in human typhoid blood. These observations showed that the living normal venous blood does not contain a ferment; that ammoniacal urine may be deprived of its ferment by filtration in *vacuo* through a thick layer of charcoal; and that living typhoid blood holds in suspension living cryptogamic germs, capable of vegetating in receivers containing pure air only. Since no reduction of temperature, compatible with the life of the organism, can destroy these ferments or restrain their vegetation, and this argument is supplied to those who have joined issue with Brand and who still rely upon the "old methods" in the treatment of typhoid fever.

M. Cyon, who sometime since demonstrated the intimate relations existing between the semi-circular canals and the centres of innervation of the eye, has attempted to explain the physiological signification of these relations, in a very interesting paper which was presented to the Academy by Claude Bernard just previous to his fatal illness. According to M. Cyon the semi-circular canals are the peripheric organs of the sense of space, that is to say, the sensations existed by irritation of the nerve-endings in the ampulæ of these canals supply us with our ideas of length, breadth and thickness, the impressions made in each canal corresponding to one of these three dimensions, and inducing our perceptions concerning the arrangement of the objects around us and the position of our own body in relation to them. He also believes that the physiological stimulation of the peripheric termination peculiar to the organ of the sense of space, takes place mechanically by means of the otoliths in the ampulæ—these otoliths being excited into motion by every active or passive movement of the head and also by the aerial waves which the membrani-tympani transmit to the fluid contained in the semi-circular canals. This being so, it follows that the portio mollis of the seventh nerve contains two nerves of sense altogether distinct in their offices, viz : the auditory nerve which furnishes the perception of sound, and the nerve of space which controls the distribution and graduation of the force of innervation which may be communicated to the muscles which produce all the movements of the eye, the head and the rest of the body. The disturbances, therefore, which occur after lesions of the semi-circular canals are due, 1st to a visual vertigo produced by a disagreement, the space seen and the ideal space originally conceived through the agency of the sensations developed in the normal condition of the canals ; 2nd to the false notions which result from a confused and incorrect judgment as to the position which the body occupies in space ; and 3d to the disorders of the distribution of force in the muscles.

This explanation is as original as it is plausible ; and should it prove susceptible of positive demonstration, it will serve not only to enlarge the area of positive physiological knowledge, but to throw light upon certain problems in cerebral pathology which have, heretofore, remained obscure.

The use of pure creosote in pulmonary phthisis is attracting much attention here. M. M. Bouchard and Gimbert report that they have treated in this way, 93 patients in various stages of this disease, of whom 25 were "apparently cured," 29 wery "improved," 18 remained no better and 21 died. By "apparently cured" these gentlemen mean "a cessation of the cough and expectoration a disappearance of the fever, an increase of the weight of the body and such a change in the physical signs as indicates the progress of cicatrization;" while by "improvement" they denote "a condition in which the cough and expectoration are materially lessened, the body-weight increased and the physical indications of an arrest or diminution of the process of destruction." In a word, in 54 cases out of 93, creosote exercised a decidly beneficial influence on the disease; and, although the efficacy of the treatment has not been tested by a *post mortem* examination, the evidence in its favor, as furnished by the alterations of symptoms and signs above referred to, seems incontestable. It appears to act in this regard chiefly by limiting the bronchial secretion, and thereby in the end by relieving the cough and inducing attacks of hæmoptysis less frequent and severe. As might be predicated on general principles, it increases the appetite, restrains vomiting, and neutralizes all fœtid products. The creosote employed is a pure preparation, free from carbolic acid, having a specific gravity of 1066, forming a clear solution with collodion and being soluble in diluted alcohol. The daily dose given varied from 40 to 60 centigrammes—6 to 9 grains—while in rare cases it was increased as high as a gramme—15 grains. The following formulæ were found specially useful: Pure creosote, 13.5 parts; tincture of gentian, 30 parts; alcohol, 2.50 parts; malaga wine, sufficient to make up a thousand parts—of which from two to five tablespoonfuls were taken daily; pure creosote, 2 parts; cod liver oil, 150 parts.

As I said before, these statements are attracting much attention; and there seems to be a very general desire to give this plan of treatment a thorough trial, since all other plans have proved so barren of results and have so little to recommend them to the confidence of the profession.

I ought to mention, perhaps, that, since my last letter was written, both hydrogen and nitrogen have been liquefied, and even solidified, in the presence of the Academy.

Within the last few days the French profession has been plunged into the deepest mourning. One of its proudest representatives has paid the debt of nature, and left behind him a void which all appreciate but none can fill. Claude Bernard, the great evangelist of modern physiology whose name has become a household word wherever medical science has a worshipper, is dead.

Space will not permit me at the present moment to give a synopsis even of the splendid incidents by which his life was illustrated or of the wealth of honors by which it was crowned. Suffice it for this occasion to say that his achievements will be appreciated by the remotest generations and that France has no prouder name in all her glorious annals. Mourned by an entire people, buried by a nation and regretted by the whole world of science, this great and good man has completed his career and gone to his reward. Peace to his ashes and perpetual honor to his memory! In another letter I shall endeavor to do justice to his character and to tell of what he has done for medicine and for humanity.

Very truly and respectfully yours,

EDWARD WARREN, (BEY) M. D., C. M.

* * *

Dr. Milner Fothergill, West London Hospital, recently gave the largest dose of atropia we have yet noticed, viz:—one grain—to antidote from twelve to fourteen grains of opium taken by a female. No symptoms of belladonna poisoning were noticed, the patient recovering completely. It requires the weight of the authority of a man not less eminent than Dr. Fothergill to establish such a precedent.

The English Medical Journals repeat the rumor that Mr. Erasmus Wilson will vacate the chair of Dermatology at the Royal College of Surgeons, and that Mr. Hutchinson will be a candidate for the chair.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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Thomas F. Wood, M. D., Wilmington, N. C. }

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SEASONS OF THE PREVALENCE OF DIPHTHERIA.

We are occasionally struck with the remarks of writers, the great majority of whom, perhaps, hold that diphtheria is a disease prevailing in winter, and one very distinguished physician believes it to be essentially a disease of cold weather. In order to initiate the solution of this obscure matter as far as this locality is concerned, we have collected the mortuary statistics covering the entire period since the recognized invasion of this section by diphtheria, and have brought them together in a diagram to convey at a glance what we have learned.

The figures from 1 to 22 denote the number of deaths in given months. The white unbroken line indicates deaths among the whites for eleven years, the dotted line indicates deaths among the negroes for five years. The average range of thermometer for six years as observed at the United States Signal Station, as well as the rain-fall for the same period are given in the lower lines of the diagram.

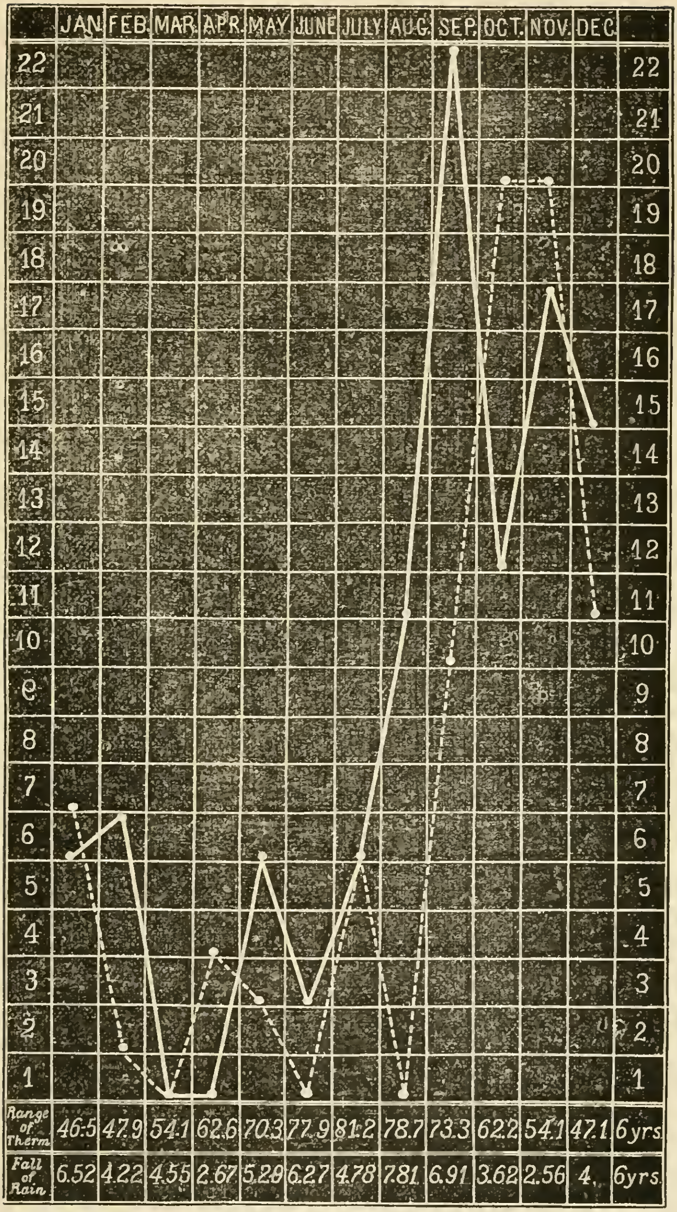

Diagram of the death-rate of diphtheria in the city of Wilmington. N. C. The unbroken white line indicates the whites, the dotted line the negroes. Figures from 1 to 22 denote number of deaths.

As far as our investigation goes, the death-rate has been greatest about the season of the highest thermometer and greatest rain-fall, and it has rapidly decreased in the colder seasons. We have no statistics to show the prevalence of the disease in different seasons, but it is fair to infer that increased death-rate denotes also increased prevalence.

The approximate parallel as observed in the diagram between the deaths among the whites and negroes in the same seasons is very striking, and we believe that if the collection of these items among the negroes had extended over a longer period, the parallel would have been even more marked. Another item we will mention which accounts for the slight difference in parallelism, and that is the large number of deaths, the causes of which were returned "unknown," when it was well-known that many negroes were dying during the prevalence of diphtheria among the whites, with a disease believed to be diphtheria. As most of them died without having a medical attendant, it is still in doubt.

In the months of September and October, the soil soakage must have reached its height as reference to the diagram will show, a series of six years average giving 7.81 inches in August and 6.91 inches in September. The thermometric averages for these months for the same period being 78.7 and 73.3, respectively, being very near the highest annual range of the thermometer.

In a report on the epidemics of France by M. Briquet, made to the Academy of Medicine in 1876, he deduces among other valuable facts, that the epidemics of diphtheria as a general rule commenced during the last months of the year after abundant rains, east winds and low temperature.

Dr. Thorne, of Essex, England,* says, "The effects of temperature and rain-fall on the spread of the disease (diphtheria) was very marked, and from the tables he has prepared it is seen that the largest number of attacks occurred during the months of excessive rain-fall, and comparatively low temperature, whereas with a rising thermometer and diminished rain-fall the number of attacks became smaller."

That increased temperature with greatest rain-fall, should in one section be concomitant with the maximum death-rate, and excessive rain-fall and diminished temperature be its concomitant in another part of the world shows how difficult it is to estimate the causal relations of season and climate. Our desire is not to construct a new theory or break down an old one, but to give the facts as we know them and wait patiently for the solution of the question.

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*Practitioner, November, 1877.

THE OLD WAY OF GETTING BEFORE THE PUBLIC.

"*A Delicate Operation.*" * * a very delicate operation was performed on * * * for the removal of an encysted tumor of the right upper eyelid, due to an obstruction of the ducts of one of the meibomian glands, thereby allowing the secretions of the sac to accumulate. These tumors create a marked temporary, and if allowed to attain much magnitude, may give rise to a permanent deformity and seriously interfere with the sight by the dragging downward of the upper lid. Considerable care is requisite on the part of the operator in the removal of these growths to avoid a section of the strained muscular fibres of the levator palpebræ muscle, the division of which might produce ptosis * * * while on the other hand equal care should be taken not to divide transversely the fibres of the orbicularis palpebrarum muscle, the section of which might give rise to a "hare-eyed" condition. * * *—*Oxford Torchlight.*

The versatility of the editors of the public press is something remarkable. Our New York correspondent had occasion to speak of the metropolitan press last month, and now we take pleasure in reproducing the above report of a surgical case by the editor of the *Oxford Torchlight*, to show that versatility is not the rare talent it is supposed to be. The editor handles the difficult technical ties with all the ease of a youngster just from his quiz master. Is he not wrong in assuming though, that his readers are as well versed as he is in such wonderful things as *ptosis*, and the functions of the meibomian glands, and the orbicularis palpebrarum. The culture of the citizens of his section is very superior we know, but the road to renown would be better assured through the columns of the

NORTH CAROLINA MEDICAL JOURNAL, and we cordially invite contributions from the surgical clinic of Oxford, whenever there is anything to report as important as an "encysted tumor of the eyelid."

We are afraid that the editor of the *Torchlight* is not aware how offensive it may be to the surgeon to have his cases paraded before the public, and we will ask him to borrow the Code of Ethics of the American Medical Association from his family physician and refer to Article on *Duties for the Support of Professional Character*, Article, I, Paragraph 3.

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EX-SURGEON-GENERAL HAMMOND.

Report of the Committee on Military Affairs, to whom was referred the bill for the relief of William A. Hammond, M. D., late Surgeon-General of the Army.

This report shows conclusively that a great wrong has been done ex-Surgeon-General Hammond, and there is no honorable way but for Congress to make the reparation. The action against Dr. Hammond seems to have been such, as the actors themselves would scarcely have pursued in the times of "piping peace."

If a committee with access to all the facts in the case, can recommend a reversal of the decision of the Court Martial held in 1864, surely reparation cannot be made too speedily. Individuals find it hard to forgive people whom they have injured, and the same weakness seems to possess Congress.

The charges and specifications enumerated in this Committee's report are new to us, and do not include the only charge we ever heard made against Surgeon-General Hammond, which was this: In conversation with an assistant surgeon belonging to a Federal regiment during the war, he mentioned the obstacles in the Medical Department on his side, and thought that Dr. H. was bringing the medical service into disrepute, and the health of the army into great jeopardy, by striking out calomel and tartar emetic from the table of medical supplies, and seemed to regard it as an ominous foreboding of greater calamities which were to follow.

MEDICO-LEGAL INVESTIGATIONS.

The address of Professor Chaillé places American Medical Jurisprudence in a light that it can be most easily studied and estimated. The work done by Dr. Chaillé is exhaustive and valuable. It claims that although the medical profession has spared no labor to bring medical jurisprudence up to the standing of a science, that as a science it has far outgrown the uses made of it as a means of justice.

We were not aware that the enormity of official criminal negligence was quite as wide-spread as we learn from this address. In most Southern States just emerging from the tornado of revolution little else could be expected than the subversion of law ; but the evil is not confined to Southern States, nor is it a new one. The time-honored coroner's jury is usually the starting point of medico-legal investigations, and a shabby and perfunctory performance it is.

Dr. Chaillé says :* "In the the United States there are probably forty-five thousand medico-legal autopsies made annually. The service of a skilled expert at these "coroner's inquests," which have exceptional opportunity and power to detect crime, is of inestimable importance ; the opportunities there presented, if once lost can never be regained. Further, our courts have annually from twenty-five hundred to treble this number of criminal trials necessitating medical testimony ; and of these a large part originate from the coroner's inquest. If to these criminal be added all the medico-legal civil trials, it will be found, I doubt not, that our courts require medical evidence in not less than twenty-thousand cases annually. Whatever the number may be, it would indicate inadequately the number of citizens whose welfare is involved, and the extent to which society is interested in the efficient application of medical knowledge to the administration of justice.

"Now what are the methods which this Anglo-American law adopts to secure in practice that 'best attainable evidence' which in theory it demands ? It entrusts medico-legal autopsies, which require special medical and some legal knowledge, to those having neither the one nor the other, except by accident ; for, these coroners (whose inexperience our law insures by constant 'rotation in office') owe their position wholly to political popularity, a qualification which a competent expert is most unlikely to possess.

"Are these unqualified officials supplied with efficient aid ? If so, again by accident, since the law leaves it to chance, or the coroner, or to his still less qualified jury, to provide a medical expert; and, as is usual, accident and ignorance provide inexperience and incompetence. Could ingenuity devise for medico-legal autopsies any methods more inefficient than these, which Anglo-American laws, framed before the birth of Medical Jurisprudence, have barbarously perpetuated?

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*Origin and Progress of Medical Jurisprudence 1776-1876. A centennial address by Stanford E. Chaillé, A. M., M. D., Professor of Physiology and Pathological Anatomy in Medical Department, University of Louisiana. Reprinted for the benefit of the Legal and Medical Profession.

"On this Pelion of inefficiency our legislative giants have piled an Ossa of absurdity; for, besides these fatal defects in the primary legal authorities, Anglo-American law, in order to secure 'the best attainable evidence' for its courts, where poverty and dishonor as well as the halter are administered to free citizens, clings to a method as sadly ludicrous as it is antiquated. To plaintiff and defendant the law gives full license to summon such medical witnesses as each has already found reason to believe entertain opinions the most contradictory. Who are these partisan witnesses thus surrounded by the law to apply the power of medical knowledge to the administration of justice? Surely these legal representatives of science must be competent experts? No. Well, experienced and educated physicians of repute? No. Then, of course, graduates, at least, some fledgeling hatched in nine months, and fully feathered with the plumes of every branch of medicine, Medical Jurisprudence included? No, not indispensable, since as 'a general rule,' it has been adjudged that any practitioner of medicine (that is, any man who dubs himself Doctor) has sufficient knowledge of medical science to furnish justice with its 'best attainable evidence.' 'O, [this] offense is rank, it smells to Heaven.'

"Common sense would presume that laws, so prodigal to ignorance and pretension, would provide means to test the value of scientific opinions by eliciting the facts upon which, if valid, they must be founded. Not so; since these opinions are replies to questions, which often by their very structure comically prove entire ignorance of the facts involved; for they are propounded by lawyers to whom these facts are unknown. Finally, it would be presumed that the decision as to the weight due such opinions would be left to a judge or jury specially chosen. No. Even this last poor boon, is denied by the law!

"With the power of medical science thus crippled at the coroner's inquest, then prostituted by the partisan opinion of incompetent experts, then perverted by advocates, and at last when emasculated of all vigor submitted for decision to those unable to estimate its weight; what wonder that such gross misapplications of medical knowledge brings upon it that public contempt which belongs justly to methods so monstrous, and to which true medical knowledge is a helpless, pitiable, and disgusted victim!"

These convictions are only realized by a few, but they should take firmer hold upon the masses of our good citizens. No one knows how soon the imperfection of the present system may work to his disadvantage or that of his friends.

The prostitution of the coroner's inquest in this section of North Carolina needs special enactment by the Legislature. As though it were not enough that the coroners are selected by ballot, and the office sought for the money, thereby multiplying inquests and diminishing justice, in New Hanover county the commercial emporium of the State, the Commissioners offer FIVE DOLLARS for a medico-legal autopsy, and finding this too burdensome have engaged the services of a universal and salaried expert at a very small sum! What can be the aim of these officials if it is not to break down the law or bring it into disrepute or ridicule, it is hard to say. They seem not to see the wise course, esteeming no course wise apparently, which does not enable them to present an annual report of reduced expenses. How easy it would be for the Commissioners to take upon themselves extra-official power, and select only such cases as are considered proper to examine, and then paying an expert at such a competent fee as they, as business men, would demand for services in their line. In this way instead of the coroner going to every trivial case, to have the verdict of twelve men, whose opinion in nine cases out of ten he puts into their mouths, let the sum be expended on one case and do it thoroughly. It is as correct for the Commissioners to act thus extra-officially, as it is for them to offer a fee of *five dollars*, when the law puts it at *ten dollars* as the minimum.

How to proceed intelligently without the coroner is a well educated physician, there seems at present to be no solution. In Wayne county, we understand, one public spirited physician has undertaken the duties of this office, in order to remedy the evil so long existing, and the results have been admirable. The Legislature has an easy way out of it, and that is to declare no one eligible to the office of coroner but a regularly licensed physician. As to who is a regularly licensed physician the law of North Carolina has very wisely determined. It has come to this pass now, that either the coroner's inquest should no longer be a part of the machinery of justice, or it should be so reformed as to make it efficient. We confess we have no faith whatever in an early amendment of the law, but esteem it our duty, nevertheless, to point out what we consider the best way to bring about reform.

One Southern State has actually taken a backward step, the Supreme Court of Alabama declaring that medical expert witnesses are bound to give their expert opinions at the same rate that ordinary witnesses are paid, or refusing, to suffer the penalty for contempt! Will the same court ever decide that a lawyer should give gratuitously his opinions because demanded by a court? Such an example would be very precious.

But let us return to Dr. Chaillé's paper and quote his suggestions for remedy of medico-legal investigations:

"One proposal is that special juries be provided for special cases, and another is, that a medical assessor be appointed to advise and assist the court; either would provide better judges of medical testimony, but neither makes any attempt to supply 'the best attainable evidences.' A third measure proposes a commission of experts, chosen either by mutual consent, or one by each party and a third by the judge. This great improvement could probably be adopted more readily than any other measure suggested; but none of those thus authorized to appoint have knowledge necessary to enable them to select competent experts, and therefore this measure would certainly not secure 'the best attainable evidence.' A fourth proposal is the adoption of the French law which empowers the judge to appoint a medical commission. French authorities, while urging the adoption of the German system, denounce their own with even contemptuous bitterness, asserting that their judges rarely appoint competent experts, but generally their own family physicians and practitioners of merely popular repute. A fifth proposal, which would require all graduates in medicine to be competent experts, as well as practitioners, has long been, and is daily becoming so much more impracticable, as to deserve no notice except as illustrating how inadequately is estimated the extent and character of the special knowledge necessary to a medico-legist.

"Professor Gross urged, in 1868, that the Judges of the Supreme Court of each State should appoint a Commissioner in every judicial district, to elect and estimate medical evidence; and that he should be provided with two or more medical experts as assistants, to make all medico-legal examinations. This is the only measure, thus far considered, which aims a practical blow at both our evils." * * * *

We sincerely hope that Professor Chaillé's address will find its way into the library of every doctor and lawyer in the land.

REVIEWS AND BOOK NOTICES.

Transactions of the Twenty-Eighth Annual Meeting of the American Medical Association. Held in Chicago in 1877, pp. 694. Philadelphia, 1877. Collins, Printer, 705 Jayne Street.

This volume in many respects is a very important one, embracing as it does valuable papers in medicine and surgery, and we regret that their consideration at sufficient length to do them justice would carry us beyond the limit of our space.

The address of the President, Dr. Bowditch, of Boston, was well worthy of the occasion. None knows better than the speaker, the past and present condition of our National Medical Association, and we may say that few would have spoken the truth so frankly as to the reasons why the Association has lost reputation of late years. It must have been a painful duty for the President to allude to these short comings of the Association, but now that they have been manfully spoken it behooves American doctors to ponder the situation honestly. We cannot do better than to give in Dr. Bowditch's language the conclusion of the whole matter.

"But the future of this Association depends mainly upon the way in which physicians, especially the young scientific physicians of the present hour, do their duty towards it. If our best men will not come up to the meetings, and work for the common good of all; if they stand aloof, uttering vain complaints of inferiority of our work, or actually scoffing or sneering at us, we shall accomplish less hereafter than we could wish. But we shall certainly live in spite of all opposition, and if we, who, year after year, attend these gatherings are determined that, so far as in us lies, nothing but what is excellent shall be allowed, and that our publications shall be sifted by trained experts of every iota of dross, then we shall be sure of doing a really noble work, and shall be able eventually to claim and to get the respect of the whole profession.

"The Association is gradually and healthily growing stronger. Each year it will have new young life instilled into it. Thus it will have combined in it perpetual youth, a stalwart manhood, and, as I sincerely trust, a genial old age."

We must unwillingly pass by the "*Address in practice of Medicine, Materia Medica, and Physiology*," by Dr. P. G. Robinson, of St. Louis, and the paper on "*Typical cases of Phthisis with results*," by Dr. Charles Denison, of Denver, and devote the rest of our space to the "*Report on Animal Vaccination*," by Henry A. Martin, M. D., of Boston, It is impossible that any more important work can claim the attention of the medical profession and the people of the United States. Upon the clear solution of the question involved in the paper before us depends the future of vaccination. It has been a serious lay enquiry for the past fifteen years. Is vaccination after all the beneficent thing it has so long appeared to be? Are we not in our desire to protect ourselves against the remote chances of small-pox undertaking a most questionable operation, and even running the risk of bringing greater evils than small-pox upon ourselves? It would have been better for the mass of the medical profession if they had taken the matter so much to heart, and sought with interest the causes which have brought about so much anxiety to the laity.

In this country, perhaps, the routine course of the practice of vaccination would have never been brought to the bar of enquiry except for the outbreak of the war. The massing of men into great armies made it necessary that vaccination and re-vaccination should be performed to a very great extent, for as among the rural southern population there had been no compulsory vaccination laws, and as the practice was only set in motion by the alarm caused by a case of small-pox in a neighborhood, the number of primary vaccinations necessary to be done, taxed the power of the army purveyors to their utmost. Such a state of things has been truly called a vaccine famine, and it amounted sometimes to a panic. The history of the vaccination practice in the Southern army is too painful to review, and but for the lesson it has given to the world had better not be recited.

Soldiers partook of the panic, or wantonly courted an evil which gave prospect of disability and furlough, and whole companies performed so-called vaccinations on their own responsibility with matter, which was in a great many instances nothing less than pus from a scorbutic ulcer, and in some well authenticated cases virus from indurated syphilitic ulcers. From the camps this evil practice spread to the towns and villages, and reversely, until throughout the confederacy there was a crop of so-called vaccinations bearing no relation whatever to the protective Jennerian sore.

It was then the government sought to return to first principles, viz: to procure a crop of vaccine vesicles by the variolation of cattle after the method of Ceeley and Thiele and Sunderland. In

Richmond, Virginia, the experiments devolved upon Surgeon Jas. Bolton, in Wilmington, N. C., on Surgeon A. M. Fauntleroy, we are told, and like work was done at a station in Tennessee, perhaps Greenville: careful work was done by these gentlemen, than whom none were more conversant with the literature of the subject. Their result was negative and we may be thankful that it do not cause such a disaster as we have known to follow, *i. e.*, the propagation of small-pox from vesicles mistaken for vaccinia.

In the Northern armies the same evils existed to a great extent, if we are to judge by the seven hundred spurious vaccinations innocently done by us with crusts from the Surgeon-General of United States army, in 1865. We think it may be stated wi hout fear of contradiction that spurious vaccinations were the rule: and the student who had trusted to his observation during the late war to learn to recognize the typical Jennerian vesicle, would look upon a vesicle the result of animal virus with doubt and suspicion.

This hasty glance at the condition of vaccination practice, covers the space of about five or six years, and indeed no new light came to us until in September, 1870, Dr. Henry A. Martin, of Boston, inaugurated the greatest reform known to the practice of medicine in this country, by the introduction of animal vaccination. We will adopt Dr. Martin's definition to make it clear what he means by animal vaccination.—"The inoculation of a young selected animal of the bovine species, from an original spontaneous case of cow-pox, from this, others, and so on in continuous and endless series as a source and the only source of virus to be used for the protection of the human race from variolous disease."

Dr. Martin sent a special agent to Paris to obtain supplies of virus from Professor Depaul, who propagating virus from the now world-famed case of spontaneous cow-pox which occurred in Beaugency in 1866. Dr. M. had previously recieved some animal virus of this stock, and had gathered sufficient experience of the details of inoculation to enable him on the arrival of the virus brought by his agent to proceed in the work of propagation with more confidence. He is very accurate and explicit as to the details and geneology of his stock, and informs us that the virus brought to America was from the 258th, 259th and 260th animal of Dr. Depaul's series, beginning with the heifer of Beaugency.

He tells us furthermore that, "during the Franco-Prussian war and the seige of Paris, animal vaccination ceased," and Professor Depaul assured him that virus carried by his agent in 1870 was the last left that city, and that, during the seige the "stock" was lost, adding further that "no comments need be made on pretended 'importation' of Beaugency virus since the Franco-Prussian war."

It is a striking temptation to follow up the historical details of animal vaccination in Europe, but we must pass by this interesting portion of the subject to notice the "peculiarities of the phenomena of vaccinia induced by the use of original cow-pox virus, or early removes therefrom, and of the virus of long humanized cow-pox." Under this head is described the appearances of the vaccine disease as pictured by the earlier writers, a branch of scientific knowledge so long neglected by the mass of the profession that it is worth re-producing.

"The duration of this disease, as described by a great many of the early writers on vaccination, and by an occasional original observer during the last fifty years, who has enjoyed opportunities to study it, varies from twenty-one to even thirty days from the insertion of virus to spontaneous fall of the crust, papulation at points of insertion at end of third or beginning of fourth day, first development of vesicle at end of fifth day, commencement of areola latter end of ninth or beginning of tenth day, decline of areola end of twelfth and often not till the thirteenth or even fourteenth day, increase of growth of vesicle till the complete decline of areola, and even for two or three days after the areola has entirely disappeared; secretion evidently taking place into the periphery of the vesicle even after desiccation of its centre has commenced. Complete desiccation of the vesicle and consequent formation of crust or scab not accomplished till the sixteenth or seventeeth day; the crust never spontaneously falling before the twenty-first day, much more frequently not before the twenty-fifth day, and often its fall is delayed till the twenty-eighth, thirtieth, thirty-second, and occasionally even a day or two later. This crust, the result of vaccination with cow-pox virus and early human removes from it, is described and figured in cases of old works and drawings as of a shape exactly the same as that of the vesicle, a circular form and a very decided umbilication or depression in centre. Its size, though not as great as that of the vesicle at its fullest development, sometimes, when the induced disease has been most perfectly and undisturbedly developed, very nearly approached it, and frequently of nearly two-thirds the size, in breadth and thickness of the vesicle which it represented. The color of the crust is described as of a rich dark brown, sometimes of a very dark mahogany or amber. The vesicle, as of a pearly or slightly bluish tint; the areola, of a bright rosy color; the depth and vividness of which varied somewhat with the complexion of the patient and the degree of vascularity of the skin." (page 205-206.)

It was noticed in these early vaccinations that the vesicles did not tend to spontaneous rupture, but desiccated regularly, involving very deeply the true skin. * * *

Another peculiarity noticed was that the dried cow-pox was slow to "take." This slowness of action was not observed even after one human remove. All of these phenomena and many more have been identified since, in the spontaneous cow-pox of Passy discovered in 1836, Estlin's stock in England in 1831, and lastly in the Beaugency stock discovered in 1866.

Dr. Martin then gives an account of the "Peculiarities of Jennerian or long-humanized virus." It is interesting to follow him here. He shows that humanized virus had a tendency to progressively shorten its course, the further it is removed from its original source. The experience of our author is very remarkable, extending over more than twenty-five years. So exact were his observation he tells us that he was able to detect vesicles and crusts of certain "stocks" he was cultivating from others, even among great numbers.

In order to elucidate the subject better, Dr. Martin has reproduced Bousquet's beautiful drawings, showing in parallel groups the difference between the long-humanized virus of 1800 with the new virus of 1836. Those students of vaccination, who, like ourselves, through the liberality of Dr. Martin, own the original gem by* Bousquet will sympathize with him in his complaint that the heliotype process has not done justice to the original; but the imperfect copy teaches what a long description might fail to impress—the very great superiority of vaccinations directly from, or only a few removes from the cow. The old vaccine is pictured as marching parallel up to the eleventh day, and declining rapidly towards the fourteenth day, dropping its crust on the sixteenth day, leaving the faintest trace behind it on the twenty-fourth day. On the other hand, the Passy virus of 1836 reached its development on the fourteenth and fifteenth days, dropping its crust on the twenty-fourth day, answering to the classical description and accurate pictures left to us by Willan and others.

Dr. Martin puts us under additional obligation in reproducing

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***Sur le cow-pox Découvert á Passy prés Paris, 1836, 4to 35 pp.**

enough of Decantelen's incomparable chart of vaccine cicatrices, to give some slight idea of the preciousness of the original. In this plate the heliotype process comes far short of the mark, but we agree with the Special Committee on Publication that the illustration will be acceptable and useful. The original chart* is one of rare value, and must be seen to be appreciated.

Dr. Decantelen divides vaccine cicatrices into fifteen species; (p. 216 note) these drawings illustrate a perfect type of each species. In the original plate there are representations of over sixty more scars, but these are divided into groups, each group being varieties of one of the fifteen species.

To very many physicians who came into practice in the last twenty-five years, they will for the first time see in these drawings of Decantelen, a genuine vaccine cicatrix, without, perhaps, they may have had some experience with the bovine virus. Many cicatrices may now be seen in communities which have shared the good fortune of being vaccinated with this "Martin virus," and more than once we have been called upon to explain why vaccine marks were so much larger and distinct now than in persons vaccinated years ago.

We now come to the statistical items in this report. Dr. Martin labored under the very great disadvantage in having no sources of statistical information, not even from the government could we obtain any information when we applied some months ago; therefore, he has been obliged to trust to his own observations, which have been larger perhaps, than that of any living person. "During the six years and nine months since I (Dr. M.) introduced animal vaccination, I have vaccinated and superintended the vaccination of 580 animals, besides some forty more in my early experiments. From these animals over 800,000 charged points, and an uncounted, but very large number of crusts and tubes of fluid lymph—many thousands—have been issued. This virus has been consumed by nearly 9,000 physicians whose names are on my register, besides a very large number whose names are not recorded." With all this experience Dr. Martin is entitled to speak with authority, and he informs us that the results of one re-vaccination as 73 per cent. of success. Some of his correspondents reported as high as 90, 94 and 96 per cent. of success, which leaves room to doubt the correctness of the returns or to infer a miserable lot of primary vaccinations. "I feel sure," adds Dr. Martin, in conclusion under this head, "if one hundred people, thirty years old, who had been vaccinated but once, and in the first year of life, should be vaccinated with perfect vigorous bovine lymph, that almost every one of them would give more or less decided, generally very decided, vaccinal results. An adult vaccinated once and in infancy is almost sure to "take" when re-vaccinated with perfect virus. A person, twenty-five years old, first and well vaccinated at five years or upwards. Can hardly ever be re-vaccinated with a decided result."

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*Tableau Analitique, Descriptif et Iconographique des Cicatrices de la Vaccine disposé dans sa partie descriptive suivant les principes de la méthode analytique de Lamarque, &c. Par J. L. B. Denarp Decanteleu, Docteur en médecine, &c.

The advantages of animal vaccination (1) is the induction of a far more perfect development of *vaccinia* than follows the use of virus of long-humanization. (2). The ability of renewing at will genuine vaccine by return to the animal. (3). That cutaneous diseases are not transmitted by this method. (4). That syphilitic infection is positively prevented. (5). That amounts of virus large enough to meet any demand can be obtained by proper effort, thus avoiding such a panic as occurred in England last year in consequence of the inability of the National Vaccine Institution ("by far the most efficient agent of Jennerian vaccination in existence") to furnish supplies. (6) That it permits the vaccine disease to be developed without interruption, by tapping the vesicle to obtain lymph. The most experienced vaccinists now holding with Jenner, that to be protective to the highest degree, a vesicle should be allowed to run its course entirely undisturbed. (7). The expensiveness of this virus is only an indication of the great care and outlay necessary in its production. (8). Entire immunity from erysipelas. (9). The large percentage of successful re-vaccinations produced from animal virus.

"How can animal vaccination be made more available to the profession and people of America?" is the pertinent enquiry with which Dr. Martin's valuable treatise ends, and it is a question that should meet with a practical solution at an early day. Our study and experience both lead us to the conclusion that it is by animal vaccination that the old time Jennerian prophylaxis is to be reëstablished. But the production of virus in this way a large outlay in money is necessary, undivided attention to a disagreeable business the year round is required, and the operator must have a friend of experience. We have known a successful operator of several years experience, to be on the verge of losing his stock by causes which the minutest attention seemed to be unable to avert. Animal virus is, therefore, necessarily expensive, and its perpetuation in unbroken succession a matter of some doubt in view of the very small fee paid for vaccination. It will only be produced so long as there is a profitable return to the operator.

Dr. Martin thinks there is but one plan which will ensure a supply in an unbroken succession, and that is by giving government encouragement to an institution which could be endorsed by the proper authorities.

How this could be done with propriety without causing a clamor from the establishments not rewarded with the authorization is the difficult point in the case; but without any special enactment it would seem but fair that to Dr. Henry A. Martin to whom the country is indebted for the introduction and cultivation of animal virus, and to whom every operator in the country is indebted, directly or indirectly, for gratuitous training in the business, should be recognized by the Department of War and the Interior as the author of the reform in vaccination practice in this country. It is an acknowledgment which could come with a very good grace from a government which protects her citizens in monopolies of inventions the best of which are insignificant as compared with the great blessing which the private means and individual exertions of an enthusiastic specialist has bestowed upon his country.

Virginia Medical Monthly for January, 1878, containing *The Transactions of the Medical Society of Virginia*, 1878.

The Virginia Medical Society for a few years past has adopted the plan of publishing their Transactions in one volume with the *Virginia Medical Monthly*, thereby enhancing the value of each publication.

The address by the President, Professor James L. Cabell, of the University of Virginia, is full of sound advice about the management of the State Board of Health, which is applicable to all similar struggling bodies.

In his remarks upon the duty of individual physicians to work systematically and faithfully for the relief of suffering humanity and to rescue the profession from the disrepute into which it has fallen. He continues: "If it be incumbent on us to keep fully abreast of the latest discoveries in pathology and therapeutics for the benefit of those whose lives are confided to our care, it is equally our duty to communicate to our associates any and every contribution it may be in our power to make to the common stock of useful knowledge. To some extent this may be done by communications for the medical journals, or occasionally by more elaborate publications, all within the sphere of individual action; but, in my judgment, the physician who works exclusively by himself neglects a most important and efficient means of receiving and imparting knowledge. * * * I hold it to be the duty of every loyal member of the profession to connect himself with the Medical Society of his State, to attend its meetings as often as practicable, and to make such contribution to its Transactions as circumstances will permit. Let no one seek to shirk this responsibility on the ground of lack of opportunity to find suitable material for such contributions. Practitioners in retired and rural districts contrasting their scanty opportunities with the rich harvest offered to those who have access to large hospitals, seem to consider that the necessities of a routine practice in the country preclude the possibility of such investigations as may lead to useful discussions. This is a fatal error. It has been well said, that 'whoever recognizes a fact, however insignificant it may appear to him, and reports the discovery, makes a valuable contribution to science.' Now, such facts are to be observed in private practice as well as in hospitals, in the country as well as in cities."

The other addresses and papers are "*The Study of Medicine*," by W. C. N. Randolph, M. D., Charlottesville; "*Report on Advances in Chemistry*," by M. G. Ellzey, Blacksburg, Va.; "*Reports on Advances in Obstetrics and Diseases of Women and Children*," by Robert J. Preston, M. D., Abingdon, Va.; "*Report on Advances in the Practice of Medicine*," by John S. Apperson, M. D., Town House, Va.; "*Advances in Hygiene and Public Health*," by L. S. Joynes, M. D., Richmond; "*Special Report on Poisoning by Custards and Ice Creams*," by J. S. Wellford, M. D., Richmond; "*Special Report on the Epidemic Zymotic Diseases of Animals*," by John R. Page, M. D., University of Virginia. In addition to this may be mentioned voluntary papers by Martin L. James, M.

D., *on Heart Clots: A Report of three Cases, &c., and the Etiology, Diagnosis, Prognosis and Treatment of Cardiac Thrombosis, &c.;* "*Bony Union of Fracture of the Neck of the Femur within the Capsule, &c.*" by William Selden, M. D., Norfolk, Va.; "*Iodoform as a Local Remedy,*" *&c.*, by J. E. Chancellor, M. D., University of Virginia. Then follows the discussion of the regular subject—"Instrumental Labor."

We cannot do more at present than to make this bare mention of the many valuable contributions contained in this volume, but hope to return to it in a future number. Suffice it to say our Virginia neighbors have set us an example of earnestness of purpose in the support of their society worthy of our emulation.

We are pretty sure that the early and handsome appearance of the Virginia Society's Transactions is due to the energy of the able Secretary, Dr. Landon B. Edwards, who is also able to accomplish the immense labor necessary to editing the *Virginia Medical Monthly*, and the details of a general practice. May his success be equal to his energy.

MEDICAL ANNOTATIONS.

INEQUALITIES IN THE LENGTHS OF THE LOWER LIMBS BEFORE AND AFTER FRACTURE OF THE FEMUR.

Dr. J. S. Wight has contributed a very interesting article, and one of great importance to physicians in a medico-legal point of view, to the *Medical Society of the County of Kings.*[*] The article bears the above caption, and is the sequel of an article on the same subject which appeared in the *Archives of Clinical Surgery.*[†] Dr. Wight's opinion deduced from the measurement of sixty persons was as follows:

"1. The lower limbs of the same person are not always of the same length.

"2. The greater number of the lower limbs, comparing the limbs of the same person, show a difference in length.

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[*] Proceedings for February, 1878.

[†] February, 1878.

"3. The left lower limb is oftener longer than the right lower limb.

"4. About one person out of every five has lower limbs that measure the same length.

"5. The difference in length of normal lower limbs of the same person varies in different cases—from one-eighth of an inch to an inch.

"6. The measurements of the lower limbs of cadavers and skeletons confirm the above results."

These results were brought in question, but as these cases have been scattered and cannot again be referred to, he produces a second table embracing forty-two patients, with their nativity, occupation, length of limbs in inches, and the differences in each limb. The second table of cases in the main confirmed the first.

"The following conclusions (based on the 102 cases in all) of internal measurements of the lower limbs."

"I. In each of twenty-three cases the normal lower limbs were equal by measurement.

"II. In each of seventy-nine cases the normal lower limbs were unequal by measurement.

"III. The equal cases are to the unequal cases as $1:3\frac{10}{23}$.

"IV. In twenty-seven cases the *right* lower limb was the longer.

"V. In fifty-two cases the *left* lower limb was the longer.

"VI. The difference in the length of the normal lower limbs of the same person varies from one-eighth of an inch to one inch. One case had a *left* lower limb one inch and three-eighths of an inch longer than the right limb ; this belongs to my previous table. Another case had a *right* lower limb one inch and one-half of an inch longer than the left limb. * * *

"VII. In twenty-six cases there was a difference in length of the lower limbs of one-half of an inch and more.

"VIII. In nine cases there was a difference of more than one-half of an inch.

"IX. In one hundred and two cases, *the average difference in length of lower limbs, is twenty-eight one hundreths of an inch—practically, one quarter of an inch.*"

It is not necessary to follow Dr. Wight through his analysis of femora examined and measured, as our summary would rather tend to confuse, and we must refer our readers to the article in question, and come to the practical question involved.

"How often would we expect to meet a case in which the lower limb, after treatment of a fracture of its femur, would be longer than its associate ? and he answers * * '*in the surgical practice of a large hospital we could only expect to find one case in which the lower limb, after fracture of its femur, was longer than the other, in a period of sixty years.*"

Dr. Frank H. Hamilton addressed Dr. Wight a letter in which he states that he has done him and science an injustice, as he had just found time to verify by actual observation the correctness of his

(Dr. W's.) statement, and that of Dr. W. C. Cox, of Philadelphia, that the femora of most adults are of unequal length.

Here are some of the conclusions arrived at:

1. The greater number of normal lower limbs are unequal in length. 2. The left lower limb is oftener longer than the right lower limb. 3. The probable average natural inequality of the lower limb is about one quarter of an inch—perhaps a little more than this. 4. The probable average accidental inequality of lower limbs, after good treatment of fracture of the femur is about three quarters of an inch. 5. There will be about one case in ten—or eleven—that will give lower limbs of equal length after the treatment of fracture of the femur. * * 6. A case of apparent lengthening of a limb after fracture may occur in the service of a large hospital in sixty years. 7 It is impossible for the surgeon to make lower limbs always of equal length after fracture of the femur. Any claims to that effect cannot be credited. 8. The only perfect standard of a lower limb of which the femur has been broken is the limb itself before injury. 9. So far as we now know, it is better to break the *left* than the right femur."

The medical profession owes their thanks to Dr. Wight for working out this important lesson in the surgery of deformities. Now let the courts of law see to it that no injustice is done surgeons in suits for mal-practice in cases of shortened limbs, until this new chapter in science shall have had its purpose, weight and bearings.

PROFESSOR SEE ON THE ACTION OF IODIDE OF POTASSIUM IN ASTHMA.

1. The respiration becomes free in about two hours; and when it was administered some hours before the paroxysm the development of this is almost certainly prevented. The second paroxysm is suppressed with certainty. 2. The respiratory murmur can be heard in regions wherein it was suppressed. 3. Recent emphysema disappears, with the exaggerated sonority dependent upon it. 4. The râles cease to be sibilant, and become mucous, allowing of the penetration of air. 5. At the end of some hours the orthopnœa and emphysema have given place to normal respiration, intermingled or not with disseminated mucous râles. 6. When the asthma is chronic with permanent emphysema, if the treatment be continued after the subsidence of the attack, not only do the paroxysms totally cease, but the emphysema and oppression habitual to the asthmatic entirely disappear, especially in dry asthma. In catarrhal asthma the catarrh may persist for a longer or shorter time after the dyspnœa has disappeared. 7. When the asthma is due to valvular lésion of the heart, the effects produced are but slight; but when it is connected with degeneration or hypertrophy of the cardiac tissue itself, the iodide treatment leads to the disappearance of the dyspnœic element.

But before pronouncing on the existence of cardiac asthma, we should be aware of a fact that may easily give rise to error. This is, that in a great number of the subjects of asthma we may observe at the apex of the heart, and more rarely at the base, a very gentle but very evident systolic *Bruit de souffle*, which may lead to the fear of the existence of valvular lesion. But this sound which seems to reside in the valves of the right side of the heart, entirely disappears, and that in some days, with the removal of the asthma by means of the iodide treatment.

Professor Sée's plan is to give a solution of the iodide containing an equivalent of about sixteen grains of the salt daily.—*Medical Times and Gazette, from Bulletin de l'Académie.*

"TENDON-REFLEX" AND LOCOMTOR ATAXY.

The above rather awkward phrase is the term applied to a phenomenon long ago discovered by the school-boy, and now studied for its physiological and pathological import by Professor Erb, of Heidleberg and Professor Westphal, of Berlin. Dr. Grainger Stewart recently delivered a lecture on this phenomenon in the University of Edinburgh. (*Medical Times and Gazette*, February 2d, p. 107.) By sharply tapping on the ligamentum patellæ, while the foot is dangling down and knee bent, a quick jerking forward of the foot is produced, after an appreciable interval succeeding the tap. All parts of the tendon are not alike sensitive, and all persons are not sensitive to the same degree. Dr. Stewart arrives at the conclusion "by exclusion as well as by direct observation that the tendon is the starting point of the irritation; and as the structure is supplied with nerve-filaments, we can be at no loss to understand how the movements are brought about."

This seems not to be a mere curious physiological phenomenon but has its pathological significance. Dr. Stewart agrees with Erb and Roger, "that in fully developed grey degeneration of the posterior columns of the cord the 'tendon-reflex' is lost."

"But in a lecture published in Berlin in January, Westphal has raised the important question whether the 'tendon-reflex' does not disappear even before the development of the acknowledged symptoms of locomotor ataxia; and, whether, therefore, its absence or presence may enable us to pronounce positively as to the nature of some spinal cases otherwise obscure. In connection with neuralgic pains in the limbs, while atrophy of the optic nerves, and such-like conditions frequently, but not exclusively associated with locomotor ataxia, he has found the presence or absence of 'tendon-reflex' afford valuable indications as to the nature of particular cases."

That Telephone Stethoscope.—A correspondent of the *Medical Times and Gazette* of the 2d of February, asks why may not the telephone be utilized, by bringing out audibly the abnormal sounds of the chest in such a way that a whole class may listen at one time, and not fatigue the patient by repeated painful examinations. Dr. William Bird promptly replies in the next number of the same Journal that he has tried the experiment, and has not yet succeeded and has many doubts about it.

We call this item to the attention of our readers because we are quite confident that some shrewd Yankee doctor has the very article hid away under his great coat, and will come smilingly into the lecture room of some metropolitan college to amuse the boys with what John Bull will puzzle his brain in vain to produce.

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COLLECTANEA and CORRESPONDENCE.

A CURIOUS CASE OF TOBACCO POISONING.

To the Editors of the North Carolina Medical Journal:

I wish to call your attention to a case of tobacco poisoning which puzzled me no little, and the solution of it at last may serve to open the eyes of medical men to like possibilities.

An infant eight months old had been separated from its mother all day on the occasion of some public celebration, and left in charge of a negro nurse. Late in the evening the child was brought home and I was immediately summoned. I found her very pale and vomiting almost without cessation, even after the contents of the stomach had all been ejected. The pulse was extremely rapid, extremities bedewed with a cold sweat. It looked really alarming, and all the more so because the child left home in good condition. My first suspicion was poisoning, and by tobacco. But how could an infant not able even to crawl get tobacco? These thoughts all perplexed me, but still I could not but return every time after wandering away from my original suspicion to explain it by any other course than tobacco.

The nurse seemed as anxious to explain the matter as the parents were to inquire into it. Finally the ray of light came! The negro nurse was a snuff-dipper, and in order to quiet the child when it was hungry, chewed up some crackers and fed her with it, and in this way incorporated enough snuff with the food to produce the symptoms. This opinion was corroborated by a subsequent examination of the vomited matter. The child made a good recovery.

Yours truly, J. R. L.

February, 1878.

ANTI-HERPETIC MERCURIAL LOTION.

℞
Hydrargyri Bichloridi, gr jss.
Ammoniæ Muriatis, ʒ ss.
Alcoholis, ℥ jv.
Aquæ Lauro-Cerasi, ʒ jv.

Dissolve the salts in alcohol and distilled water and add emulsion of bitter almonds to ℥ xvj. Use as a lotin ion pityriasis, acne, chronic eczema and pruritus.—*l'Union Médicale.*

An Uncommon Cause of Death from Tracheotomy.—Dr. Richard C. Brandeis in a letter to the *Medical Press and Circular* records a singular cause of death in a case of tracheotomy. It being found necessary to tracheotomize one of his patients for œdema of the trachea and lungs. Chloroform was given and when slightly under the influence, the knife was plunged into the trachea. Dyspnœa set in violently, increasing as he cut the tracheal rings, five of which he divided. He introduced as soon as possible a hard rubber canula, but the patient was dead. A *post-mortem* revealed the fact that the incision had divided five of the rings of the trachea, but the knife instead of dividing the lining mucous membrane had separated it from the anterior and lateral walls, and the more he cut the more he pushed the membrane before him, and thus cut off the supply of air; the introduction of the tube merely capped the climax.

The important lesson to be drawn from this accident, is to secure a firm hold on the mucous membrane by plunging a tenaculum into the upper inter-cartilaginous membranes as soon as the trachea is exposed.

Adhesive Plaster in Pleurisy.—The employment of adhesive plaster in acute pleurisy, is among one of the most useful applications. The Philadelphia correspondent of the Boston Med. and Surg. Journal, of February 25th, says—that it is again gaining favor with some physicians of that city, and is used either by applying broad strips over the point of pleuritic inflammation, or better still by passing a broad strip completely around the chest, compelling the patient to carry on breathing by the diaphragm and abdominal muscles. Professor John B. Biddle mentions it in his Materia Medica. It is not to be understood that the application of the plaster excludes other treatment, but is only an auxiliary.

Vaccination Syphilis.—The *Lombardy Medical Gazette* of February 2d, records some cases of transmitted syphilis. Twenty-six children were vaccinated from the arm of an infant who appeared to be healthy in every respect. Twelve of the children soon exhibited symptoms of syphilitic contamination. and it was greatly feared that many if not the whole of the remaining fourteen, might be similarly affected.—(*Medical Examiner.*) The Rivalta calamity seems not to have had a very salutory effect upon vaccination practice in Italy.

Threatened Poisoning of the Rhine.—Near the end of the past year the screw steamer "Schelde und Rhyin" having on board 656 casks of arsenic (aresnious acid), foundered in the Rhine near Engers. Great fear was entertained lest the poisonous cargo might be penetrated by the water, and destroy the lives of the animals and the inhabitants along the river below the place of the accident. The boat and cargo were raised with as little delay as possible, and only five of the casks were found to be damaged by water, none of them having lost any considerable portion of arsenic. The consequence of the collapse of all the casks and the mixture of their contents with the river would have been most disastrous.—*New Remedies.*

The vegetarians will hardly gain much comfort from the following statement: In monasteries where the monks are confined to vegetable diet, says Professor Gubler, the arteries are found greatly indurated at the early age of thirty-two.

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OBITUARY.

FLEETWOOD CHURCHILL, M. D.

Dr. Fleetwood Churchill, died on the 31st of January, 70 years of age. He was well known in America by his "Theory and Practice of Midwifery," "The Diseases of Women," and "The Diseases of Children," which were in their day valued text books. His public and private life shed a lustre on the profession of Great Britain.

DR. LUNSFORD P. YANDELL.

Dr. Lunsford P. Yandell closed a long and useful life the 4th day of February last, at the advanced age of 73. He was in his early life a teacher of medicine in the Transylvania University, University of Louisville, and Memphis Medical College. He was ever busy with his pen, and for many years a leader of medical thought in the West, as Editor, Professor and President of the Kentucky State Medical Society.

JAMES BLUNDELL, M. D., F. R., C. P.

Dr. James Blundell died January 15th, at the advanced age of 87. He had been so long out of practice that the present busy generation of practitioners had nearly forgotten him. Not so with the older generation of practitioners on this side of the Atlantic, and especially in the Southern States. His opinion about the use of forceps has left its indelible impression upon many of our venerable confréres. "I do not like to see an elegant pair of forceps," says Dr. B., in his "Principles and Practice of Obstetricy, &c." "Let the instrument look like what it is, a formidable weapon." "*Arte non vi* may be usefully engraved upon one blade, *Cave perineo* on the other." He had a just conception of the value of transfusion, and believed that after it had gone through its many stages of ridicule and neglect it would finally be adopted.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

Messrs. Wm. R. Warner & Co., Manufacturing Chemists, &c., Philadelphia, Pa.—Gentlemen :—The Phosphorous Pills submitted to me for Chemical Analysis and Microscrpic Examination afford only traces of Phosphoric Acid, and contain the one-twenty-fifth of a grain (gr. 1-25) of the element in each pill, as expressed upon the label : they do not exhibit particles of undivided Phosphorous, the mass being perfectly homogeneous in composition, soft in consistence, and thoroughly protected by the non-porous coating of sugar, from the oxidizing influence of the air. Each Pill is an example of what skill, care and elegant Pharmacy can do.—I regard them as a marvel of perfection.—A. E. McLean, Analytical Chemist and Microscopist, 40 and 42 Broadway, N. Y., late of Gardner & Ainstie's Laboratory, Edinburgh, Scotland.

Warner's Pills, as we know from the samples sent us, are all that can be desired. They are far superior to any we have seen.

Advertiser's Exhibition at Goldsborough.—Several advertisers have signified their intention of exhibiting articles advertised by them, at the meeting of the State Medical Society, and we ask their attention to the following directions :

All packages must reach Goldsborough, N. C., by the 10th day of

May. If exhibitors do not accompany the goods they should be directed to DeRosset & Wood, care of Messrs. Kirby & Hill, Goldsborough, N. C. This exhibition was devised by us to enable our advertising patrons to bring their products directly to the attention of the purchasers, and to enable the physicians of our State, who are seldom able to go away from home, to inspect the elegant pharmaçeutical preparations, surgical devices, surgical dressings, &c., &c., which lend so much to the successful treatment of their patients.

American Wines.—The traditional respect paid by all good Americans to wine supposed to be genuine and bearing some remarkable name on the label has gone about far enough, and it is now time that common sense was being exercised in regard to wines or any other products. The Port Grape Wine produced by Mr. Speers, of *Passaic, New Jersey*, made from the Oporto grape, is far superior to the factitious Cette and other commercial wines, having good body, fine flavor, freedom from acidity, and sufficient astringency. Mr. Speers' success should stimulate the wine-makers of Eastern Carolina to a more careful study of the growth of the vine, and of the details of the management of their wine. What a wine-grower in New Jersey can do ought to be within the reach of Carolina farmers, with the advantage of climate on their side.

The Galvano-Faradic Manufacturing Company will have some of their instruments on exhibition at the next meeting of the State Medical Society, that their merits may be thoroughly tested.

Send to H. H. Burrington, Providence, R. I., for a pamphlet describing his *Uterine Elevator.*

Medical Society of the State of North Carolina,
Secretary's Office,
Littleton, N. C., January 30th, 1878.

☞ *The Meeting of this Society will take place in Goldsborough on Tuesday, the* 14*th of May,* 1878.

It is earnestly desired that members of this Society having papers to read, will announce the title in the March. April and May numbers of the North Carolina Medical Journal. A full and free discussion of papers can best be accomplished by such preparation. Notice sent to the North Carolina Medical Journal will be promptly attended to, as I have made this arrangement with the Editors: of course, due consideration will be given to papers not so announced. It is hoped too, that early preparation will be made to make this the fullest and best meeting of the Society. Arrangements by the Goldsborough Committee will be announced in due time.

L. J. Picöt, M. D., Secretary.

NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D., } Editors.
THOMAS F. WOOD, M. D., }

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ORIGINAL COMMUNICATIONS.

THE SOURCES OF CONTAGIUM IN TOWNS AND RURAL DISTRICTS.

By M. J. DeRosset, M. D., 15 West 26th Street, New York.

The light which has been shed upon the origin of the contagium of the various zymotic affections has come mainly from researches conducted in densely populated cities where the *apparent* conditions are so diverse from those which obtain in rural districts that the application of the same conclusions to both are not always obvious. The well-paved streets, the abundant water service, the system of sewers and the contiguously built dwellings of cities are features so unlike the economical arrangement of country towns and farm sites that in their relation to the genesis of disease-germs the two may readily be supposed to have nothing in common. The possibility of excluding with great approach to certainty, almost every other condition which could favor infection in populous communities, has enabled sanitarians to trace its origin to sewer emanations and mephitic house-air. There is scarcely any difference of opinion as to this, among intelligent men, and without holding it necessary to say, what is the physical nature or power of a specific poison, whether it is gaseous or solid, all are agreed that it cannot enter or exist in any dwelling except where aided by defects, which close inspection will not fail to reveal, in the water pipes, sewers or drains. But this knowledge—and knowledge it is, because so definite and assured as to be more than theory—affords no explanation of the occurrence, for instance, of diphtheria sporadically or in epidemic form, in villages and isolated country dwellings. In these its insidious approach, its characteristic features and its large mortality in no wise distinguish it from the diphtheria of the great cities. It traverses large extents of rural territory, invades towns, villages, hamlets, cottages, discriminating but little between poor and rich, and without always furnishing in its march a satisfactory evidence of direct transferrence through individual contact. Indeed, instances may be cited, *ad libitum* of its existence in places, to which it is certain it was not communicated through personal means, and where its local origin is without dispute. In these the favoring conditions are certainly not in drains and sewers, but in other agencies capable of giving rise to the same pernicious developments, and which like the first are fortunately remediable under proper sanitary direction.

What these circumstances are, has doubtless been a source of perplexing thought to many a country practitioner who in vain efforts has tried to explain the existence of zymotic diseases around him upon the theories so lucidly set forth by those whose observations have been made in the great cities. Unfortunately the country practitioner is too prone to look to his city brethren for solution of problems of which, in many instances, the factors lie in most available profusion close to his own hand.

Before attempting to point out the sources of diphtheria (and, indeed, of any of the contagious and infectious diseases, for *ex una disce omnes*) among country populations, it will facilitate our purpose to review the general principles which underlie the genius of morbific germs; for our inquiry is based upon the theory of the reception of such germs from without, ignoring wholly, the as yet, untenable notion of Dr. Richardson, of their originating *de novo* within the body through pernicious glandular action.

As our object is to give a practical cast to this paper it would be unprofitable to digress into the much mooted inquiry whether a given specific germ can possibly issue out of any conditions or environment without the previous introduction of elemental forms, whose life history leads naturally to the birth of other germs of identical form and properties.

Such a question is not susceptible of a definite answer at this stage of our knowledge. It is strictly parallel with that involved in the controversy, between the Tyndal and Pasteur school, representing one opinion, and Bastian and his followers another, as to the abiogenesis of living particles (bacteria; &c.,) in sterilized fluids. It is also closely connected with the question of the origin of life itself upon this globe, and like it opens up an infinite vista of possibilities the remotest of which recedes *pari passu* with our seeming approach towards the end. For if, to cut the Gordian knot of the difficulty, we admit the advent of the simplest form of life upon our earth as due to their meteoric transferrence hither from some other planetary body, the inquiry will not end here, but will only be transferred thither, and the entire cosmic condition shown to have been originally such that life must have been nowhere possible under the thermal necessities of the nebular and earlier periods. The origin, therefore, of primal living forms, and the advent of contagium germs may be left to the evolutionists and others to whom the speculation rightly belongs, and in tracing up the sources of contagium, our work is not to deal with its first origin but solely with the essential causes of its multiplication.

All living organisms whatever, from the most complex to the simplest, require, probably for their existence and certainly for their generic reproduction, the presence and actual contact of atmospheric air and water. In the case of the simplest forms, as contagium germs, and many of them may be so occult as to be known only through their effects, their continuance and increase involves a location, a habitat, known as their *medium* or *nidus*. This medium or nidus must contain or consist of organic matter, of animal or vegetable origin, be moist and supplied to a liberal extent, at least at the outset of the process, with some air. Now a given germ being introduced into or upon such nidus or medium, under a favoring temperature enters immediately upon a process of multiplication, reproducing itself indefinitely, as long as its environment furnishes the pabulum thereto. When the supply of organic food or moisture ceases the reproductive process is interrupted, though probably the germs then existing continue to live for some time in a passive state, awaiting a supply of fresh material, or their own transferrence to new habitats.

If the contact of atmospheric air or oxygen is very free and if it permeates all parts of the medium a new and wholly different process is set up, one of oxidation which results in the distribution of the germs and the sterilization of the medium. Various other agencies will render the medium sterile, such as an elevated temperature which destroys the germs, and certain chemical substances (antiseptics, anti-zymotics, disinfectants) some of which act through germinal destruction, and others only through suspension of the reproductive power. The conveyance of germs from one point to another is effected probably, in three ways: (1.) *en masse*, by transportation of infected substances; (2.) by streams or currents of water; (3.) through atmospheric diffusion. The possibility of conveyance by all of these methods is indisputable, and it is obvious that the first two may be hindered, perhaps absolutely, by sanitary regulation; but the third, which I consider the chief agency whereby diseases are spread between distant points, is far less under our control. We cannot tell in which direction or to what distance the diffusion of contagium germs will take place, since the ever varying currents of air and the shifting winds are incalculable elements in the estimate. Nor can we adjust with accuracy the opposing values of forests, bodies of water or topographical features generally, though it is more than probable that they all have some relation to the progress of infection.

I believe, however, that whatever the distance to which contagium particles are conveyed, they move in cloud-masses, invisible truly, but nevertheless distinct and segregate, quite analogous to the passage of nebulous masses of minute insects, which the wind bloweth whither it will.

For if particles were transferred simply the destructive power of the atmosphere would limit their life to minute ranges, but in a great mass, a sufficient number may survive to traverse long distances, and inaugurate new points of infection. In no other way does it seem possible to account for epidemics passing between distant points, leaving intervening territory uninvaded—the other modes of conveyance, of course, being excluded. And the hypothesis of germ-clouds is not far-fetched, but is in perfect analogy with the existence of moving masses or bodies of condensed air, which every one concedes now that they have been demonstrated by Professors Henry and Tyndal in their experiments on the propagation of sound. Having made clear in this brief sketch the scheme involved in the reproduction of contagium germs, and the methods of the diffusion and conveyance to remote points, it is unnecessary to occupy ourselves with the question of the originating *de novo* in new localities, only admit the possibility of their transferrence and it will require no effort of the mind to see that the sanitary environment of most of our urban dwellings and rural homes is such as to furnish a ready and prolific nidus for their propagation. Remember that the presence of stagnant (slowly changing) air, moisture and organic matter, particularly of an excrementitious nature, constitutes the sole essential conditions. Can there be any doubt that these exist abundantly in every part of this country? As yet sanitation and sanitary engineering have but little recognition in the political economies of our states and cities, the construction of public buildings is conducted with a total disregard to hygienic laws, and even in selecting locations, no sufficient attention is paid to the conditions of aspect, shelter and water of the soil which have such an intimate bearing upon the temperature and salubrity of the edifice.

If this is to be said of the public structures what may we not say of the slovenly manner in which the most of our rural houses are located and built. No matter how fair the house unless its surroundings are salubrious "he that buildeth it," says Lord Bacon, "committeth himself to prison."

We will only point to the unpleasant picture of the features which too often surround us:—how defective the sub-soil drainage; how small provision is made for carrying off the surface water; how waste and kitchen refuse are allowed to accumulate about the premises; how damp and dusty are the stables, barn yards, piggeries; how imperfect the water supply; how dangerously located the privy, sending its surface washings or emptying its cess-pool into well or spring! Preventive medicine is now reaching a higher place than medication, and if we only look around us we shall find a new and more profitable field for our labor in that direction. It is true our advice is not often sought in the location and domestic arrangements of the family home, but the obligation is no less binding upon us as physicians to make known the sanitary defects as they exist.

The whole question is one of drainage and removal of waste, for if moisture and organic matter be permitted to accumulate they inevitably furnish conditions for the breeding of contagion.

The first thing to be considered in reference to the prevention of moisture is the existence of shade trees which prevent the access of the sun's rays at all periods of the day. It is safe to say that that side of any dwelling is the least salubrious which receives the least amount of sunlight, and dense foliage, therefore, should not be allowed to stand as a permanent shelter against the sun. The direction of prevalent winds is a matter of no little moment, laden as they may be, with the miasm of neighboring sloughs and marshes. And that marsh air contains visible floating germs which are the sources of diseases is sufficiently attested by the experiments of the Italian savans in the Campagna.

The declivity and nature of the soil are to be considered in estimating the provisions for removing the rainfall, and for the general surface and sub-soil drainage. If the soil is light and porous, moisture soon sinks into it and seeks the subterranean water courses, but if it is compact and impervious it will hold moisture, which, if not remedied by judicious system of open ditches or better sub-soil pipes, will inevitably favor the propagation of disease-germs, besides affecting the temperature and hygrometric condition of the house.

The surface water should find easy method of escape, not being allowed to collect in pools, and the dripping roofs, those abominations of country houses which more than is suspected, are a fertile source of ill health, should not be suffered to maintain their circle of puddles beneath the eaves, but provided with leaders and gutters should be made to conduct the roof water into the general cistern or principal drain. Turning next from these natural features let us examine into the more important matter of the disposition of chamber slops, wash water and kitchen waste.

These consist largely of nitrogenous and oleaginous substances, capable of undergoing changes of the most pernicious character. And yet it is not very common (through ignorance, and not laziness or indifference, let us hope) for heads of families to allow this refuse to be dumped in close proximity with the dwelling?

Even the traditional tin basin of the back porch has its share of potency in contributing to the unsanitary condition, being carelessly emptied over the rail, and itself unless frequently washed and sunned, smelling of decay from the putrid accretions which cling to its sides.

Doubtless it is within the power of every one who reads this paper to recall the soapy pools which characterize the back premises of town and country dwellings. Year after year as the habit is continued, the soil becomes saturated with putrescible substances, the ground air and moisture furnishing the complement for breeding from any stray germs that a hostile urine may bring within the area of their combined influence; and some fine morning the practitioner, sealing his eyes to the evidence around him, wonders where under God's heaven this case of diphtheria came from. All waste whatever, whether of a liquid or solid nature should be diligently excluded from finding a receptacle in the soil within a long distance of the dwelling. It ought to be conveyed daily to be thrown where the natural configuration of the ground, will aid its disappearance in a safe direction. It will do no damage if cast widely over the surface of the garden plot sufficiently remote from the dwelling, and will largely increase its fertility.

Should the means of the house-holder enable him to construct a receptacle and drains for its removal, they ought to be made of earthenware pipes (not of open brick work) neither too large nor too small for the volume of waste to be conveyed, inclining not less than four inches in thirty feet, and terminating in a distant cesspool, or as Mr. George Waring recommends, by a system of open pointed and perforated pipes beneath the surface of a field or plot of ground, for fertilizing purposes. The expense of this latter method will be more than compensated for by the increased yield of grain or garden product in one season.

The construction of drains involves also the provision of methods for their periodical flushing and disinfection, for they may become the breeders of disease through putrefaction of the organic matters which adhere to their interior. An elevated cistern or tank of several barrels capacity, filled from the roof by leaders or from the general cistern or well by a pump, supplies the means of flushing, and will thoroughly cleanse the drains provided they are not too large.

But there remains yet the most important matter of all in reference to the sanitary condition—the water supplies and privies. Our town and country vicinages ordinarily depend upon artificial cisterns, wells, or natural springs for their water supply, and these may each be a source of any of the infectious diseases. Cisterns gather water from unclean housetops, the leaders of which through faulty construction often hold putrid pools, occasionally no means of filtration is provided, and the cistern itself is often foul from neglect or through penetration of insects and burrowing animals. Wells and springs drain more or less great areas of territory, receiving the washings of refuse from around dwellings, or putrid spots in the soil, and from the cess-pools or vaults beneath those temples we raise to Cloaca. What a suggestive feature, by the way, they add to the landscapes when in the roseate morn, the dew trembles upon the leaf of the honey-suckle whose foliage and whose flowers scarce cover the disgrace or stifle the odors with their sweet incense! What extent or area of territory a spring or well will drain, depends upon a variety of circumstances—its location, the topographical features and the density of the soil.

In a bright town in New Jersey, where the soil is clayey and sufficiently compact, the existence of disease was directly traced to a well located 60 feet from the privy vault. In loose soils, such as exist in the upper strata around Wilmington, N. C., it is possible for contamination to ensue even at greater distances than that; and yet how often do we find the privy and well within ten feet of each other. If the well is deep penetrating through the clay or rock strata, it is probable that the water enters it from long distances, and the danger of poisoning is much less. But all wells are liable to be injured by washings from the surface, and by the falling in or burrowing of reptiles, toads, frogs, moles, snails, and insects which die and become putrid with the inevitable result of rendering the water unwholesome. For this reason wells should have tight brick or stone walls, cemented, and it were better to arch them over far beneath the surface of the ground, leaving only a small opening through which the pipe passes to the pump, itself to be tightly closed around the pipe, and afterwards the excavation to be filled in over the arch. Constructed in this way wells never require cleaning, and remain permanently sweet.

A good, deep drive-well is also free from the liability to be injured by surface filth or insects. For locating and constructing privies, the indications have been sufficiently pointed out. No objection exists to placing them contiguous to or even within a dwelling if provision is made for the *daily* removal and cleansing of the receptacles—*but under no circumstances should they be made to receive slops and waste water.* All cess-pools and vaults should be forbidden by law—for they inevitably poison the soil by filtration, or the atmosphere by the gaseous emanations from their festering contents. The use of dry earth as a deodorant will on account of the slight trouble it entails never be widely adopted, although in the country this is reduced to a minimum, and would amply pay in the fertilizing value returned.

The general principle is to keep all waste and excrement moving, never allowing any thing to remain standing, or if properly pursued may without difficulty be made to assume a most important economical relation to farm production.

Finally, the barn-yard, stables and piggeries must not be forgotten as a frequent and potent source of contagium. My mind turns incidentally here to a prominent garden and dairy farm within view of the church spires of Wilmington, whose barn yard may be seen from the public highway to be fetlock deep in manure and wet filth. A few steps off stands the well, an open arrangement with a windlass, and within the sound of a whispered word the neat vine covered dwelling shelters its inmates, but not against the contagium which sooner or later must start on its death-dealing journey from their door. Is the picture a rare one?

The subject is not exhausted as the limit of the magazine article is. I have only aimed to point out the pernicious influences which surround too many of the provincial homes and town residences in the country. Every reader of this knows that the description is not overdrawn, and it must be clear to all that the evil is not wholly unremediable. It is the duty of legislatures to make the necessary provision in money, to enable the health boards to discriminate the knowledge which is required in dealing with unhealthy locations and conditions, natural or artificial, and subsequently to grant to the health boards authority to secure a thorough observance of the sanitary regulations.

In the meantime the profession is not without power, through careful inspection and in its personal influence and counsel to meet cases, and so to contribute largely towards stamping out the filth diseases.

A NEW AND REFINED METHOD OF EXAMINING THE PULSE.

By Octavius A. White, M. D., New York.

Physiological literature abounds with antagonisms relating to the arterial pulse. In searching its annals, proof is everywhere found of the reluctance with which each important point respecting this *Res fallicissima* of Celsus has been conceded.

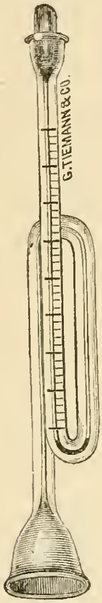
The period is quite recent where the *tactus eruditus* was alone relied upon to interrogate the pulse and determine the degree of abnormal heat present in cases of critical moment. When we compare observations thus devised with those now so carefully attained with instruments of precision, we indeed felicitate ourselves upon the superior working hypothesis upon which treatment can be based at the present day.

The strong feeling of a want in physiological research has led to the invention of instruments of nice precision for critically exploring the circulation of the blood—instruments which not alone exhibit and analyze the various features of the pulse, but absolutely measure and transcribe them in bold and legible characters.

Marey's sphygmograph, and more recently that improved device of Dr. Pond, have been justly pronounced valuable auxiliaries in physical diagnosis; but it must be evident to all familiar with their use, that, the delicate pulse qualities and quantities, which they aim only to magnify and display, undergo through their highly elastic springs and membranes a certain degree of distortion, and further, that the number of vibrations transmitted and described by such agencies cannot fail to be multiplied by rebound.

Experience has fully convinced me that it is quite impracticable to obtain with their aid a pulse impression which shall be free in any respect of characters incident to their peculiar mechanism. It can be laid down as a maxim that in direct proportion with complexities about the means employed to obtain observations upon a given pulse must be the indifferent quality of the result.

It was in consequence of these independent views that I some time since devised and suggested the employment of a substitute totally devoid of either spring or membrane, by which the delicate characters of a pulse wave could be revealed to the sight. On account of the comparatively wide range of application and the novelty of this device I named it a HÆMARUMASCOPE.*



This particular manometer, already so fully described† and of which the annexed is a faithful delineation, can truly exhibit the well-known percussion wave, note the velocity and define the force and degree of regularity about respective parts of each blood movement, taking place within the calibre of arteries. With its assistance we can ascertain the amount of peripheral resistance and oscillatory expansion occurring in the various avenues of the circulation and also test the degree of facility or embarrassments with which the blood traverses the net work of the capillary system.

In the normal pulse, coördinate as to time, rythm, frequency and volume, the register is seen to rise and fall, not abruptly or in haste, but with a steady, uniform and tranquil measure. In instances of high arterial pressure when the vessels remain full and tense, even during diastole, the effect upon the artery, as shown by this instrument, is remarkably characteristic of the degree of oppression the vascular system is suffering.

In certain instances the systole is represented as a labored act and occupying an appreciable interval of time. In another class of cases the contraction at the heart is shown to be sudden, swift and uncompleted, while diastolic action proves comparatively feeble in character.

The shock wave, which is indicated, with an ordinary sphygmograph, by a direct upward toss of its lever, is expressed by the hæmarumascope, with a bold and sudden shooting upward of the colored fluid drop within its shaft. When well developed and represented, this feature is naturally followed by a series of perceptible undulations about the register, varying directly with the character and force of the pulse.

In a remarkable case of chronic emphysema in which the pulse was small, weak and irregular, while the heart beat was so violent as to shake the patient in his bed, the hæmarumascope represented alternately two distinct pulse characters, one slow and deliberate

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*Αἷμα, blood; ρυμα, stream; σκοπεῖν, to show.
†Vide The American Journal of the Medical Sciences, July, 1877.

for two or three beats; the other receding three or four rapid, jerking and indistinct pulsations.

The experienced and discriminating Forget has asserted that contraction and insufficiency of the cardiac orifices are less positive causes of abnormal sound than is generally supposed. In aortic regurgitation, which is known to be a most frequent form of valvular disease, the defect has not unseldom escaped recognition, while hypertrophy of the left ventricle became apparent through embarrassment of the pulmonary circulation; or seen until mitral incompetency, permitting conspicuous regurgitation at commencement of systole, is reached. Under these circumstances, the hæmarumascope can easily detect the systole and so hasten an early solution of the case.

Any competent observer, therefore, proficient in the use of this instrument, and who fully realizes that each movement transpires about the fluid within the shafts represents a sphygmic fact, can distinguish at leisure any irregularity about the circulation, and be ready to interpret a departure from a normal pulse wave in accordance with the truthful revelations.

With this addition of another appliance for the perfection of physical diagnosis, may we not with confidence indulge the hope that the timely recognition of obscure affections of the heart will be speedily ensured; that the variances among men of science respecting functional and organic diseases must finally cease and above all that anxious patients shall be spared a painful suspense, wavering between hope inspired by one medical examiner and despair impressed by another.

222 Second Avenue.

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PROBABLE DUALITY OF GONORRHŒAL VIRUS—WRIST-DROP FROM ALCOHOLISM.

By J. R. L., M. D.

It was first clearly pointed out by Hunter, that gonorrhœa and syphilis were not produced by the same virus—that they were distinct diseases. Since that time floods of light have been thrown upon the study of venereal diseases, and especially since Mr. Jonathan Hutchinson has studied them so carefully and recorded his experience in such a graphic and lucid manner.

Succeeding the discovery of the non-identity of gonorrhœal and syphilitic virus, came the discovery by Bassereau, as recently as 1853, of the duality of syphilitic virus, a theory which has gained ground everywhere since, and is now in a more or less modified form almost universally adopted in this country, perhaps by all but one leading syphilographer. This theory, substantiated as it has been by extensive and sufficient clinical observation, has resulted in practical benefits, leading as it has done to a more successful treatment of syphilis.

The first writer to my knowledge who promulgated the duality of gonorrhœal virus, was Professor W. A. Hammond, of New York, but I cannot recall his theory. The purpose of this paper is to incite inquiry, to set others to thinking in order that the truth or falsity of the theory of the duality of gonorrhœal virus may be established.

Every practitioner has had perplexity in the treatment of gonorrhœa, some cases yielding to local treatment, and readily, in a few days; others yielding as easily by internal remedies; some getting well spontaneously, while others have resisted the conjoined influence of local and constitutional remedies and strict diet. Even taking into account the irregular habits of most patients who apply to us for treatment for gonorrhœa, the failure of treatment depends more upon an early and proper diagnosis than at first sight seems the case.

Several years ago, chordée was a very frequent accompaniment of this disease; now, (it is my experience) it is very rare. I think I can never more forcibly bring to your attention the points I wish to make, by giving you an account of some cases, which show either different degrees of intensity or difference in the virus with which the patients were affected.

H. G. E., aged about 25, called me to treat him for orchitis. I found him suffering severe pain. He had had a profuse gonorrhœal discharge which had almost subsided upon the attack in his testicles. I treated him merely by suspension of the testicles, rest in the recumbent posture, lead lotion, and opiates. The subsidence of the pain and the swelling were so considerable, that at my next visit, I considered that the patient required no further treatment. I was summoned, however, in a few days to him, and found him suffering with acute articular rheumatism of both knees, which, treated with alkalies lasted him six weeks.

W. A., aged about 23, sanguine temperament, consulted me for gonorrhœa, which I treated simply with diuretics, and urethral injection. I made only one prescription, when the patient returned complaining of intense pain in his joints, and from that time he had a severe case of acute articular rheumatism lasting ten weeks. The gonorrhœal discharge entirely subsided with the appearance of the rheumatism.

Another case. Two gentlemen consulted me about the same time for a discharge, which was thin and yellowish, staining the shirt perceptibly, but attended with little scalding. One had cohabited with a married woman, the other with his mistress. The patients had no suspicion of the impurity of either of them. But as medical men are, and of right ought to be skeptical, and recollect the proverbial mendacity of such patients, I treated these cases with simple injection of sulphate zinc and tannin. In a few days they were well. One of the party named who had a mistress, subjected himself again to the contagion, and had a resulting discharge as formerly. I made a close vaginal examination several times, of this woman, but found only a leucorrheal discharge which I treated, and for the third time, after I had pronounced his mistress well, the gentleman contracted another discharge from the urethra.

Now there was a marked difference in the character of these cases, commencing with the initial discharge. In the first two, there was a creamy yellowish discharge and the peculiar odor; it was very abundant, and the scalding intense. The discharge subsiding immediately upon the establishment of orchitis, not an unusual course, and the gonorrhœal rheumatism following the subsidence of the inflammation of the testicle. The first urethritis yielding to a simple injection of an astringent solution, the second going on to inflammation of the testicles and joints, and running the usual course of rheumatic fever.

It may be argued that the intercurrent rheumatic affection in one case had no relation to the gonorrhœa, but was caused by influences entirely extraneous. Here were too cases though in which the symptoms were carefully noted, and in which the results were identical. But in the milder cases of gonorrhoea there was no scalding, but a thin inodorous discharge, and no constitutional symptoms.

I commenced the treatment of gonorrhœa in my early practice, with the greatest confidence in specific remedies and with the belief that there was no difference in them. But I have since come to the conclusion that in the more severe variety of gonorrhœa—the inflammatory form—that stricture is more apt to result; that mere local treatment is not sufficient, and that its course is very intractable. I am not satisfied that any sure differential diagnosis can be made, but I think as the cases occurring in the practice of most physicians are reviewed, they will agree with me that there is some reason to believe in the duality of gonorrhœal virus.

Non-specific urethritis yields readily to local treatment of a few days, while specific urethritis can only be cured by a lengthy course. It is useful to be able to make a prognosis for venereal patients, as their whole concern seems to be as to the duration of their disease. This way of dosing every patient with copaiba at the first sign of a discharge is enough to deter every patient from incurring the risk of infection, and needs re-consideration at the hands of the profession, but not for that reason alone.

I have noticed that there is always some febrile excitement in severe cases of gonorrhœa, with a tendency to priaprism and muscular soreness, and hyperæmia of the conjunctiva; and while it is beyond doubt a fact that gonorrhœal ophthalmia is produced by the inoculation of the virus in *most* cases, I have had a suspicion for some time that conjunctivitis in some gonorrhœal patients was not due to inoculation. If gonorrhœal ophthalmia attacked only those patients who were personally filthy, it would bear out the established theory, but such is not the invariable rule. In fact we have purulent ophthalmia, the Egyptian variety for instance, which becomes sometimes a wide-spread epidemic, but which must have a starting point in some cause quite independent of contagium. All I insist on is this, that there are some forms of gonorrhœa which independently of inocculation, have a predisposition to conjunctivitis, but which fortunately stop short of destructive inflammation, while on the other hand, some cases are so asthenic, that it hardly occurs to the physician to warn against inocculation.

WRIST-DROP FROM ALCOHOLISM.

My attention has been called lately to two cases of wrist-drop, occurring at long intervals in my practice, illustrating, as I believe, an undescribed phenomenon in alcoholism.

Case 1.—W., a clerk, aged 21, consulted me in the summer of 1871, for wrist-drop. He had for some months been a hard drinker. His appetite was poor and whimsical, his tongue constantly coated, sleep disturbed by unpleasant dreams; sometimes there was insomnia. The palsy was of the left hand, which could not be raised on a line with the level of the arm; extensor paralysis, in other words, was complete. The patient's history of the trouble was, that he had slept on his wrist, and on awaking in the morning the paralysis was as I saw it. I sought for the cause in ale-drinking, suspecting that perhaps it was lead poisoning, from the lead-pipes used to convey the ale from the cask to the counter. The evidence was not sufficient to justify this conclusion. The patient rarely drank ale, and never soon in the morning the most opportune time for getting a dose of lead, that is, before it had been washed out or much diluted by a free current of ale. There had been no lead colic, and there were no blue lines on the margins of the gums, nor any of the signs of lead-poisoning. Shortly after the patient was confined to his bed by a prolonged and excessive debauch, having congestion of chylopœtic viscera, terminating in a large hemorrhage from the stomach. No treatment other than that to relieve the nervous and gastric symptoms was adopted, and the wrist-drop disappeared with convalescence, and the elimination of alcohol. The patient has been since that time in perfect use of his wrist.

Case 2.—C., a painter by trade, consulted me in November for wrist-drop. He had at the time a strongly alcoholic breath, being in that bewildered and nervous condition following a long debauch. He had eaten nothing for some time, but only complained that he had no power of control over the wrist. There was complete paralysis of the extensor muscles. In this case there was more reason to suspect lead-poisoning. The patient had never had lead colic, and did not have at my examinations any of the symptoms of lead poisoning, except the suspicious wrist-drop. There were strong reasons besides these against the theory of lead poisoning. The paralysis was not symmetrical, but confined to one wrist.

It yielded in five or six days to a solution of bromide and iodide of potassium, but I think it very likely that it would have disappeared upon the elimination of the exciting cause—the alcohol.

without treatment. A subsequent debauch, but of shorter duration produced similar symptoms in the patient named above. His wrist-drop occurring only after a long and excessive drinking bout.

N., another patient, taking down with partial paralysis of locomotion, was attacked at the same time with wrist-drop which lasted twelve months. In this case the extensor paralysis of the wrist was complete. There was no indication of lead poisoning after thorough examination, nor did the nature of the patient's occupation lead to the suspicion. After confinement to bed for many months, and going through many phases of cerebral disturbance; with loss of memory verging on imbecility, with œdema of the feet and legs,—as convalescence was established, restoration from paralysis was so complete that the patient now writes with his usual grace. Total abstinence has cured this patient entirely.

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SELECTED PAPERS.

THE AMERICAN MOUNTAIN SANITARIUM FOR CONSUMPTION, AT ASHEVILLE, N. C.

By Stanford E. Chaillé, A. M., M. D.
Professor of Physiology and Pathological Anatomy, Medical Department, University of Louisiana.

[*From Advanced Sheets from the Author.*]

Although familiar with the caprices of fashion in medical as in other matters, and with the fact that this baneful influence has been often and sadly illustrated, in the history of the diverse resorts commended for consumptives, I, none the less, have for years advocated mountain resorts as justifying the best hope for arresting incipient consumption, and did present reasons for the faith that was in me in the May No., 1876, of the *N. O. Med. and Surg. Journal*, in an article entitled "The Climatotherapy of, and the American Mountain Sanitarium for Consumption." Continued interest in this subject has stimulated me to gather a little additional knowledge, not only from the testimony of others, but also by personal observation ; and I propose to now present some of the evidence which has during the past two years, attracted my attention, and served to strengthen my conviction of the beneficial influence in consumption of mountain resorts, and especially of the Mountain Sanitarium at Asheville, in western North Carolina.

While the literature of the subject has, since my last article was prepared, greatly increased, and while some of the authors are not advocates for mountain resorts,—yet, I have seen no testimony impugning the capital facts ; first, that nearly all of the localities which enjoy an immunity from consumption are in the mountains ; and second, that mountain resorts thus located do yield strikingly favorable results in arresting the disease, prior to the destruction of the lungs by softenings and excavations. True, some of the writers do deny that the unquestioned good results are due to altitude, contending that these are attributable to causes other than elevation, to causes which some localities at the level of the sea possess in common with certain mountain resorts. It must be admitted that these objections have a reasonable foundation, and should not be ignored so long as the profession has reason to credit those witnesses who testify that such lowlands as Florida prove eminently beneficial to some consumptives, and that such places as the Kirghis Steppes of Asia enjoy complete immunity from consumption, although actually below, as is alleged, the level of the sea.

In my previous article I referred to the Kirghis Steppes, in connection with Iceland and the Faröe Islands of Denmark* (320 miles S. E. of Iceland), to illustrate that there were places not mountainous alleged to enjoy complete immunity from consumption. I regret that I cannot at present gain access to any reports published in regard to these distant and unknown Kirghis Steppes, nor to any information further than detached allusions to the effect, that they are below the level of the sea, and that the climate is characterized by its *dryness* and its *sudden changes*, the transitions from heat to cold being not only very frequent, but also very abrupt. My regret is due to the fact, that subsequent research has informed me that "Iceland is (see Leconte's Elements of Geology) an elevated plateau about 2000 ft. high, with a narrow marginal habitable region sloping gently to the sea;" and that the Faröe Islands are also mountainous, rising abruptly from the sea, attaining a maximum altitude of about 2200 ft., and inhabited chiefly by shepherds, therefore by residents on the heights. Thus, of the localities previously cited in proof that other than mountain localities were alleged to be exempt from phthisis, it now appears that two of the three are mountainous, and therefore probably illustrate rather than furnish exceptions to the general rule, that in our search for localities free from consumption, and therefore proper resorts for those threatened with this disease, we must go to the mountains.

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*Ziemssen's Cyclop. adds to this list the "Island of Marstrand, and the interior of Egypt." Marstrand is between Sweden and Denmark, and believed to be mountainous.

However, it is not my purpose in this article to discuss whether altitude is or is not the all-important factor indispensable to every resort for consumptives; but rather to present evidence confirmatory of the essential fact that many mountainous regions are exempt from, and do prove highly serviceable to those attacked by consumption. It must suffice the reader to be here reminded that the benefits secured in mountain localities have been ascribed—to the greater rarity of the air, causing quicker and profounder respiration, a more active central as well as capillary circulation, and increased excretion with improved appetite and nutrition;—to the greater purity of the air marked by its greater transparency, freedom from dust, and richness in ozone which purifies it chemically;—to the greater dryness and increased electricity of the air:—to the larger number of sunshiny days, and the intenser heat of the direct rays of the sun, which, conjoined with the charming diversity of mountain scenery, prompt the invalid to frequent excursions, habitual exercise, and life in the open air. Those desiring farther details on these points are referred to my previous article, and to Dr. Dennison's contribution to the "Trans. of the Internat. Medical Congress, Philadelphia, 1876," entitled "The Influence of High Altitudes on the Progress of Phthisis," in which the whole subject is treated more fully and ably than in any other publication in our language.

The confirmatory evidence which I have selected to prove the favorable influence of some mountain regions upon consumption will now be presented.

Dr. Schreiber, Lecturer on Climatology in the Vienna Faculty, teaches* that observation has proved "that consumption in all latitudes diminishes with altitude, until it finally disappears altogether," and that "renewed researches have confirmed the good results accruing to consumptives from a residence in the mountains." He, however, deems it fully proved that the good results are not due to altitude, and forcibly urges as one proof thereof, that the altitude of immunity from consumption *lessens* from the equator to the poles, as is generally admitted, while the diminished pressure of the air (i. e., the chief peculiarity of altitude) is *the same* for equal elevations, whether at the equator or at the poles.

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*See February No., 1878, Richmond and Louisville Medical Journal.

Ziemssen's Cyclopœdia, one of the most recent and highest medical authorities, states: "It may be regarded as a fact that an *elevated position* protects against phthisis. A height of *at least* 1800 or 2000 ft. seems to be requisite for this purpose. Phthisis is rare on the Hartz, Styrian (in Pinzgau), and Swiss mountains, also upon the Corderillas, and the plateaus of Abyssinia, Persia, Mexico, Costa Rica, and Peru."

A careful investigation undertaken by the Swiss Society of Natural Scientists, and continued during five years has resulted in a report to the effect that in Switzerland decrease of phthisis does beyond doubt follow increase of elevation; and that although it may occur in the most elevated places, it is very rare.

The Sanitarium for Consumption at Gœrbersdorf, Prussia (1715 ft. high)—the first of its kind—was opened in 1854 with only twelve patients during the first year, but such was its success, and such is its reputation, that, since 1873, the annual number of patients has been nearly six hundred. The sanitarium at Davos, Switzerland (5200 ft. high), had during its first year (1865) only eight patients, and in ten years increased this number to four hundred. Commending this very emphatic testimony to consideration, let us pass from Europe to North America, reminding the reader that the evidence in favor of the Peruvian Andes, as well as the Corderillas of South America, is abundant and most decisive, and was, as I believe, the first to attract attention to our subject.

All observers report that consumption is very rare on the great Mexican table-land, termed the Anahuac. Jourdanet, a distinguished French physician, and the author of the most elaborate work yet published on the influence of mountain altitude, testifies that during nearly five years' experience on the Anahuac, with 30,000 visits to patients, he observed only six cases of consumption, that this disease is very rare in Mexico above 6500 ft., and that consumptives from other countries were often completely cured.

Dr. Denison, who presents (loc. cit.) abundant and convincing evidence, in favor of Colorado, cites in addition the testimony of many others in proof that there is an approximative immunity from consumption in all that elevated section of the United States in which are located the Rocky and the Sierra Nevada Mountains.

Dr. Lewis Rogers, of Louisville, reports, and, since he is not an advocate of mountain resorts especially, reports most suggestively, as follows: "Southern California, as we know, has acquired very great repute in the last few years, and has been spoken of as destined to become the great sanitarium for consumption, and many other forms of pulmonary disease. It is to this portion of the State that thousands of people are now going for the restoration of their health, either as temporary sojourners, or as permanent residents. All of the towns mentioned [viz.: San Diego, Santa Barbara, San Bernadino, Los Angeles, and San Josê] are thronged with people of this kind, particularly in the winter season. To my surprise, *I did not find a single resident physician** at all enthusiastic in his praises of Southern California. They all expressed the rational view of the subject which I have expressed. I asked them if they were in the habit of sending their patients to Southern California, and they replied that they did so occasionally and for a brief period of the winter, but that *they preferred for most of their cases the high and cool resorts of the Sierra Nevada Mountains.*"*

The highlands of Minnesota, having an elevation of from 1200 to 2000 ft., have long enjoyed a fair reputation, which Dr. F. Staples, in Vol. 27 of the Trans. Am. Med. Ass'n., asserts, sustaining his position by strong statistical evidence, is not undeserved.

A section of Texas stands in the same category, and Dr. J. B. Robertson, in the Trans. Texas State Med. Ass'n., 1877, reports as follows: "That portion of west and northwest Texas, lying west of the 98th meridian of longitude, and north of the 29th degree of latitude, has an elevation above the sea (beginning at San Antonio, near the southern line indicated) of five hundred feet." "The beneficial effects of the climate in the area treated of is not simply a matter of opinion on the part of the writer, on purely theoretical grounds. During a practice of over thirty years in central Texas, he has seen many patients sent there with clearly marked indications of consumption, and at a time in the history of the country when such patients had to rely almost entirely upon the climate for the benefit they received. In all cases the change gave marked relief with, he believes, a prolongation of life for years with some, and a perfect cure with others." Dr. R. states, however, that this section is not yet properly provided with the improvements and facilities needful for the accommodation and treatment of consumptives. In addition, Dr. Denison alludes to the advantages to consumptives of Fredericksburg, Boerne, Waldo, and Ft. Clarke, (elevation 15000 to 2000 ft.), in the valley of the Rio Grande, Texas.

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*The italics are mine.

Passing now to mountain regions adjacent to those of western North Carolina, Dr. E. M. Wright of Chattanooga, reports, (Trans. Med. Soc'ty State of Tenn., 1876,) that the natives of Walden's Ridge a portion of the Cumberland table-lands) enjoy almost complete immunity from consumption. This ridge is from six to seven miles wide on the top, contains about 500 sq. miles, and varies in height from 2000 to 2500 ft. ; the people are poor, the houses are huts, and the accommodation is bad. Farther, Dr. E. A. Hildreth, President (1877) of the Med. Soc'ty of W. Va., addressing this society, testified strongly in favor of the influence of elevation in pulmonary diseases, stating that : "My own experience is limited to Portland, Oakland [2380 feet], and Deer Park [about 2300 ft.], W. Va., to which I have sent cases of phthisis in different stages of development, all of whom were decidedly benefitted. I mean the cough abated or disappeared, the night-sweats or diarrhœa ceased, the appetite improved, there was a gain in flesh and strength, and many were doubtless kept alive for years. Those afflicted with hay-asthma, or autumnal catarrh are, on visiting this region, exempt. If they should be suffering with the disease, the paroxysm will usually cease within twenty-four hours after their arrival."

The section of country to which I now invite attention is thus described in the "Statistical Atlas of the Supt. U. S. Census, 1870 :" "In the high regions comprised between the Blue Ridge and the great chain of the Iron, Smoky, and Unaka Mountains, separating North Carolina from Tennessee, we have *the culminating portion* of the whole chain of the Appalachians. Here, for an extent of more than 150 miles, the *mean elevation of the valley* from which the mountains rise is more than 2000 ft., scores of summits reaching 6000 ft., while the loftiest peak rises to a height of 6700 ft." Asheville, having an elevation of 2250 ft., is located in the central part or this region, wherein I have passed from three to five months annually during the four years 1873–5–6–7. My direct evidence as a practising physician is limited to the neighborhood of the Warm Springs, on the French Broad River, and some 900 ft. lower than Asheville ; though often consulted by the resident population, I have never seen but one case of consumption—this in a mulattress not a native of this section. My hearsay evidence is more extensive, yet I have never heard of but two other deaths by consumption in this neighborhood ; these were of a young brother and sister, in whom the disease was said to be hereditary, and whose family had not been long resident in this region. I have made repeated mountain excursions in all directions, and from twenty to sixty miles distant from Asheville ; everywhere I was assured of the comparative immunity from consumption of all this section, and in most places my informant denied that *the native residents* ever died of the disease.

Because of the long and well-established reputation of this region, and of the superior requisites for the accommodation of invalids at Asheville, Dr. Gleitsmann, a resident of Baltimore, in search of a suitable location for the treatment of consumption in the mountains of the eastern United States, was induced to establish here, June 1st, 1875, his Mountain Sanitarium. The foundation, at his own private expense, of the first Mountain Sanitarium in the United States, in imitation of the numerous similar institutions which have sprung up in Europe since 1854, and are now in successful operation, suffices to at least prove that Dr. Gleitsmann—who is a highly educated and competent physician, fully posted in the theory and practice of consumption, and thoroughly convinced of the superior advantages of mountain resorts in its treatment,—possesses that admirable trait of character which the French term "the courage of his convictions." The results of this initiatory venture during the two years, June, 1875, to 1877, are set forth in his "Biennial Report" recently published ; and, inasmuch as I had good opportunity, having passed two weeks in this Sanitarium in the fall of 1875, and again two weeks in the fall of 1877, to estimate the probable credibility of this Report, I deem it a duty, because of my credence therein, to call attention to some of the facts presented.

During the first year fifty-one guests were received, and their stay aggregated 3548 days; these numbers were increased during the second year to eighty-two guests and 5717 days; facts, which prove that this institution is growing not only in favor, but also more rapidly than occurred in the European mountain sanitaria. Of the total 133 guests 54 were patients, and only 43 were consumptives. While there is no disposition on the part of Dr. G. to over-estimate the importance of results observed in so small a number as 43 cases, it will still be admitted that if these cases have been carefully studied and conscientiously recorded, as I believe they were, they ought to furnish valuable instruction. The average time passed by these 43 consumptives in the Sanitarium was only about ninety days each, and the results were that 3 died, 9 grew worse, 8 did not improve, 7 were perceptibly improved, and 16 so decidedly as in some of them to justify the belief that they were cured. Thus out of 43 patients presenting all of the various types and stages of consumption, the disease was apparently or certainly arrested in 23! This result, sufficiently surprising without further explanation, becomes even more remarkable, when the cases are analyzed as to the stage of disease. For, out of the total 43 consumptives there were only 26 whom I, or other advocates of mountain resorts, would have certainly advised, to go to the Sanitarium, and of these, 20 were improved or cured. Even this result is not, so far as my own position, a sufficiently favorable statement of the facts, for I have as yet, never gone farther than urge mountain resorts for incipient consumption. Now, it appears that 14 of the above 26 consumptives, while enjoying a fair condition of general health with constitutions comparatively unimpaired, did have extensive infiltrations or even slight destructions of lung tissue, while only 12 of the 26 were unquestionable cases of incipient phthisis. These last twelve cases, having only "catarrh of the apex and infiltrations of the smallest extent," resulted in one case "improved" and eleven cases "very decidedly improved or cured;" that is, in *every case* of incipient phthisis the progress of the disease was apparently arrested, and would probably so remain under a continuance of the conditions which led to the arrest.

The strongest objection which the experienced practitioner is likely to make to the results above reported are, that "they are too good to be true;" therefore I propose to now present the evidence of other witnesses than Dr. Gleitsmann—witnesses whose disinterestedness, so far as he and his sanitarium are concerned, cannot be justly called in question; first, some indirect evidence from one source corroborative of Dr. G.'s reported results.

The indirect evidence consists of testimony to like results obtained in a distant mountain region of this country. Dr. Denison records, in the article published since Dr. G.'s report and already referred to, his experience with 66 consumptives in Colorado. Of the total 66 cases in all stages of the disease, 40 were "slightly improved," or "much improved or cured;" but, of the 66 cases only 25 were in the first stage, and of these 17 were "much improved or cured," 7 "were slightly improved," and 1 died, owing as (Dr. D. believes) to bad treatment in the hands of an incompetent practitioner. These favorable results coincide with those of Dr. G.—and this concurrence, giving strength to each, tends to inspire credence in both reports. Since the two reporters classify differently their cases, of which each had a comparatively small number, it would not prove instructive or satisfactory to institute any strict comparison between the results reported by each; however, in this connection, the following facts are of interest. On the one hand, Dr. Dennison's cases had the advantages of a much more elevated mountain region, and also of a much longer residence in this region; for his cases averaged about one year each in Colorado, while Dr. Gleitsmann's cases averaged about 90 days in his sanitarium. On the other hand, Dr. Gleitsmann's had the decided advantage of residence in a sanitarium specially devised and conducted for the benefit of consumptives. His patients have constant access to, and are kept day and night under the surveillance of a skillful physician, who has not only his own reputation but also his financial investment in a sanitarium dependent on his watchfulness, as well as on his skill. Thus I concur with those who advocate that it is of extreme importance in this as in other obstinate chronic diseases, that most patients should live under the constant supervision of a competent physician. All physicians admit the very great importance in the treatment of consumption of proper exercise, clothing, ventilation, and diet; and all know how incredibly ignorant the non-professional generally are in regard to those essentials, as in all else which concerns hygiene and medicine; hence the great advantage of skilled supervision, exercised constantly over all the details necessary to enforce a proper mode of life.

I will now present testimony, from three sources besides myself, which tends to corroborate the correctness of Dr. Gleitsmann's "Biennial Report." This evidence merits special consideration because of the circumstances which elicited it. Inspecting at Asheville, Dr. G.'s register of patients, I found the name of each followed by the name of the physician who had advised the patient's removal to the Sanitarium; and I made a private memorandum of those physicians who had sent the largest number of patients, and who were also best known to the profession. Only three names were thus noted, and the testimony of all three is presented. Thus, the evidence has not been culled over in order to adapt it to some new pet theory or to an interested purpose. Science demands, and to the best of my ability I habitually present, as is now done, "the whole truth."

Professor A. L. Loomis, of New York city, whose local reputation as a practitioner in diseases of the chest is unsurpassed, and whose fame as a writer on this subject is well known throughout the United States, sent to Dr. G.'s Sanitarium three patients during the first, and nine during the second year; facts sufficiently indicative of his favorable opinion. He writes that he did not keep a record of his cases with sufficient care to enable him to commit himself farther than by the statement that "the majority have improved."

Dr. J. B. Gaston, an able and well known physician of Montgomery, Ala., sent to the Sanitarium five patients during the summer of 1877. He testifies as follows: "All were suffering with pulmonary disease, which was in its incipiency, and all on their return home in the fall were, and still are, *in better condition* than when they left. One was very much improved, and in three others the improvement was decided. All, I am satisfied, would have improved still more had they remained longer at Asheville, and had thus avoided the check to improvement, which was sensibly felt by one at least, as the result of the debilitating influence of the weather here in the early part of October. The condition of all of these patients would, in my opinion based on experience in similar cases, have grown worse had they remained at home during the time they were at the Sanitarium."

Dr. E. P. Gaines, one of the oldest, ablest, and most experienced of the physicians at Mobile, Ala., has sent to the Sanitarium four patients, and has written to me so instructively that I quote him at length, as follows:

"My attention was first called to Asheville, as a resort for consumptives, in an article written by yourself in the May No., 1876, of the *N. O. Med. and Surg. Jour.* I immediately began to advise patients to go there. The first one to go was a young lady who had been under my care for a long time, and was steadily drifting into consumption. I gave your article to her parents to read. They sent her on; she remained six months in Dr. G.'s Sanitarium, and the benefit she had obtained there has lasted up to the present time. She has some bronchitis now, but her appetite, digestion, and general health are good, and she is fat and rosy; all the physical signs have improved.

"The second case was a young man whose father died of consumption. His health had been failing for a year; he had had fever occasionally, had night-sweats, and had steadily grown thinner and weaker. Finally he began to cough, and an examination clearly proved by the physical signs, that what I had predicted twelve months before had come to pass—a deposit of tubercles in the apex of the lungs. I had but little hope that anything would do him any good, but recommended him to go to Asheville and put himself under the care of Dr. G. He did so, and spent several months there in the summer of 1876. On his return he came to see me, and all of his symptoms, constitutional, rational, and physical, had so improved that I could hardly realize that I had before me the same man. Knowing what a dreadful thing inheritance of this disease is, and having a poor opinion of the atmosphere of our southern seaport towns, I urged him to close up his business in Mobile, and go back to live in North Carolina, for I believed that he *could live there.* He thought more of his business than of his health, went back to the close confinement of his store, and by the end of the winter had lost nearly all he had gained. This past summer he travelled again, but, though in a mountainous country, he tells me that he did not receive the same benefit he had secured at Asheville.

"The third case was a young gentleman who sent for me to see him for a hemorrhage from the lungs; he was anxious to get back to his home in Montgomery, and left that night. On his arrival, he wrote asking me what he should do to ward off consumption. I recommended him to go to the Sanitarium, where he has passed two summers. He is now well; a fine, hearty-looking young man. I expect he will spend all of his summer holidays there, he likes the place so much.

"All the four patients sent by me did well except one, who returned home worse. This fourth patient was a young man who, about June 1st, 1877, came into my office to consult me in regard to a slight hemorrhage from the lungs. He had been attending his work, and been feeling quite well up to the time of his hemorrhage. However, he had had a cough, and had been taking cod-liver oil by the advice of a physician. There were no physical signs of any moment, but I knew that he had recently lost a sister from consumption, and formed a very grave opinion of his case. I prescribed, and told him to quit work, go home, and maintain a recumbent posture, etc. In a few days I was summoned to visit him. A fever had set in which lasted nearly four weeks, and which had all the well-marked symptoms of an acute bronchitis. He also had several hemorrhages during this time. When he recovered from his fever, he was much emaciated and very weak. His fever had gone, but the bronchial symptoms remained, and they were most perceptible in the upper portion of the lungs. My diagnosis throughout was that miliary tubercles were scattered through the lungs, and were the cause of all that had occurred: and yet the mountain air had had an effect so wonderful in the cases mentioned, that I felt justified in sending him to the Sanitarium. He improved so much after he got there, that on one occasion he so over-exerted himself in walking, that it brought on a hemorrhage, succeeded by many others, so Dr. G., fearing they might prove fatal, sent for his parents. He is now (Nov. 15th, 1877) at home, confined to his bed, and I am told that he had a hemorrhage to-day. You will thus see that this is a case of acute tuberculosis; and it is nothing against either Dr. G.'s Sanitarium, or the climate of Asheville, to find that they cannot do impossibilities.

"Thus, my experience so far is small, since I have sent but four patients who remained there during the summer months only. However, the improvement in three of the cases was so well marked, that I shall continue to advise my consumptive patients to go there.

All of my patients went to the Sanitarium, and their improvement was due to Dr. Gleitsmann's skill as well as to the purity of the air at Asheville. I believe that you are right in recommending the place as a resort for consumptives, and that your opinion is worth more than that of the rest of us, since you have been there on two separate occasions, and know how well the Sanitarium is managed."

I will close the corroborative testimony by reporting the case of one of my own patients sent recently to the Sanitarium, first reminding the reader that in addition to the case, I had ample opportunity during my two visits to see a number of consumptive inmates, and to become satisfied by my own observation, as well as through the testimony of Dr. G. and of the patients themselves, that the beneficial results claimed have not been exaggerated. While at the Warm Springs, N. C., 37 miles west of Asheville, I, on July 2d, 1877, addressed Dr. G. the following letter: "This will be presented by Captain ****, who by my advice goes to Asheville, to place his wife under your charge. The apex and upper fourth of her right lung are seriously affected; prolonged expiration verging into tubular breathing, associated with crepitation and undue resonance, are well marked. However serious these signs, there are several hopeful symptoms which you will readily appreciate. Should she improve, as I believe she may at your Sanitarium, she will probably make a long stay. It is needless to urge you to do your utmost in her behalf." I deemed this case hopeful *provided* she went to the Sanitarium, and because of my confidence therein; without this and guided by past experience, my prognosis would have confidently been death within six months. In less than three months I met this patient in the Sanitarium in a condition so vastly improved, that I could with difficulty realize a change so different from my past experience, and so superior to the hope I had ventured to entertain. Admitted on July 3d, she promised me to remain a year if needful, but she had improved so incredibly, and was so anxious to return to her husband that on October 1st she—whose condition at the Warm Springs had been such as to cause much anxiety about her transportation to Asheville—left the Sanitarium to travel alone to her home in a distant Northern State. I deemed this early return imprudent, and fear that the apparent certainty of perfect recovery at the Sanitarium will not be realized at her home. Having now presented some testimony from others besides Dr.

Gleitsmann as to twenty-two cases sent to his Sanitarium, I close the evidence upon the credibility of the results reported as secured there.

My recent second visit to the Sanitarium justifies me in emphatically repeating the praise in my former article of its admirable management. Its excellent table, loaded with choicely cooked and appetizing dishes, its ventilation, cleanliness, good order, comfort, and moderate charges of from $40 to $50 per month, cannot be too highly lauded, even by one who like myself has patronized the most famous hotels and restaurants in Europe, as well as in America. I have known many invalids to visit Asheville, and there remain in far less comfortable but just as expensive quarters, because prejudiced against all institutions for the accommodation of the sick; imagining that, at the table and incessantly everywhere within the Sanitarium, their spirits would be depressed, and their sensibilities offended by the sights, sounds, and smells which are naturally associated with the sick. Testimony found on the delicacy of the sensibilities of one who, like myself, has been hardened by years passed within hospital walls, might be accepted with incredulous scepticism. Therefore, without dwelling on my own conviction that the realities are very different from the anticipations of the inexperienced, and that no such offenses are found in the Sanitarium, I will state that on each of my two visits I have been accompanied by three ladies, not only refined, but also as inexperienced and prejudiced as any women of intelligence are likely to be. I carefully watched the effect on them, and testify that they were most agreeably surprised, assuring me that they found but one thing objectionable—the proclivity of the invalids to dwell upon their individual ailments. This made slight impression on me, as I encounter great difficulty in finding *healthy people out of sanitaria* who will not persist in wearying me with petty personalities; those of my readers more fortunate might complain of the sick within sanitaria.

The facts, already stated, should be recalled, that of the total 133 guests during two years, more than half were perfectly healthy; of the 54 invalids, few were sufficiently ill either to be confined to their beds or to be unpleasantly suggestive of sickness and death, and these few were not to be seen unless sought for. I have never visited a summer resort for the healthy, where the company at the table or in the parlor was more cheerful and agreeable. On each visit I have found a larger number of persons of refinement, culture, and intelligence, than one meets habitually at hotels; for the reason, perhaps, that the class apt to be socially offensive has not the means, or, if so, not the intelligence to seek a sanitarium. As I am anxious to prove a trustworthy guide to those who may be induced to visit the Sanitarium, I must report the chief objection made against it by its consumptive inmates. This was the *ennui* of living in a place where they were cut off from family, friends, and their ordinary occupations. Some patients had, as of course it is better that every consumptive should have, their dearest relative with them; and these patients were as content as the sick are likely to be in any place. Invalids should not forget that even the healthy find the search for happiness delusive, for contentment arduous, and should prepare themselves, as best they may, for resignation to the conditions necessary for their restoration to health. Submission as cheerful, occupation as entertaining, as possible are important conditions.

Time, also, is a most important condition in the treatment of every disease, in none more important than in phthisis; and its victim should not be encouraged to expect its arrest, much less restoration to health, within some definitely fixed period. Three months is the shortest time within which decided improvement should be hoped for; if double or quadruple this time yields lasting good results the patient should deem himself fortunate; and if it should prove necessary that some, in order to preserve health, should pass, as is correctly intimated by Dr. Gaines, all the rest of their lives in the mountains—then, even this misfortune is far less grievous than the habitual progress and termination of this fatal disease. Invalids sent to the mountains cannot be too urgently warned against too short a stay, against undue confidence in a brief alleviation, and against the natural impatience to return home; faults which have often caused a rapid loss of all that has been gained. This loss for a second time is more difficult to regain than was the first.

The reader is also reminded that experience seems to have proved, contrary to what was expected naturally and therefore was taught, that hemorrhagic cases in the first stage are, as a rule, decidedly benefited in the mountains, and that the winter season is as favorable to all cases as is the summer. Dr. Schreiber (loc. cit.) represents many high authorities in stating that, "during the past ten years hundreds of invalids have wintered in the elevated valleys of the mountains with just as favorable results as in the so-called southern resorts;" and that "the practice of sending invalids to winter in the mountain regions has proved a success." At Davos, in the mountains of Switzerland, the patients are urged to remain until the snow begins to melt.

In concluding this article, I will, in order to avoid being misunderstood, allude to two topics. First, I desire it understood, that while I incline to believe that the climatic conditions which are the results of altitude are important factors in the hygienic treatment of consumption, I have not ventured to recommend any and all mountains, but only such mountain resorts as experience seems to have proved beneficial, and as supply proper accommodation for invalids. Second, I desire it understood, that in advising mountain resorts for consumptives I have had in mind solely those in the first stage of the disease; or those who, although long afflicted, have advanced but slowly on the downward road, and still maintain sufficient vigor to spend a large portion of time in the open air. I have not taken the grave responsibility of advising where those in the advanced stages of the disease should go; for, I fear that the best advice which can be given to consumptives already confined to their beds, with lungs disorganized by softening and cavities, is—to remain in, or to forthwith go to the place where they can live with most comfort, and face death with greatest resignation. However, others, with greater experience as to some resorts, seem to be more hopeful. For instance, on pp. 422–3, "Trans. Internat. Med. Congress," Dr. H. A. Johnson, of Chicago, states: "I believe that in the earlier stages of the disease, patients are benefited by going to the mountains, but, on the contrary, when softening has set in, whose cavities exist, I believe that it is hazardous for them to do so. A warm, mild climate is better then. I had about fifty patients last winter in Florida, and they came back better; even those in whose lungs cavities existed were better than they would have been had they stayed in Illinois." He therefore "will continue to advise patients in the *first stages* of phthisis *to go to the mountains*, and in the latter stages to go to Florida or Georgia."

Finally, a few words of instruction to the traveller. One railroad from the West, and two from the East, are advancing towards but have not yet reached Asheville. Proceeding by rail to Morristown, Tenn., which is between Knoxville and Bristol, and furnishes miserable accommodation, the traveller will find a branch road to Wolf Creek, 40 miles distant. From thence to Asheville is 46 miles by stage, through the superb scenery of the French Broad River, but over a mountain road so difficult that 3½ miles is deemed good staging. The Warm Springs Hotel, 9 miles from Wolf Creek, is an excellent place to rest.

On the east of Asheville is the "Piedmont Air Line Railway," with two depots—Spartanburg, S. C., and Charlotte, N. C.—from whence are branch railroads in progress to Asheville. The Spartansburg road will reach, it is said, this spring within 30 miles of Asheville; and the terminus of the Charlotte road, now about 20 miles from, will probably be this year (possibly in July) within 7 miles of Asheville. The Spartansburg route will probably be the best one for travellers from the South, while those from the North should take the railroad leading from Charlotte, N. C.

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CORRESPONDENCE.

OUR PARIS LETTER.

Sketch of Claude Bernard—Professor Sée on Iodide of Potassium and Iodide of Ethyl in Asthma—Asthma in Bright's Disease—Hypodermic Injection of Nitrate of Silver for Sciatica, and Injections of Ice Water to Reduce Temperature in Fever—The Paris Exposition.

11 RUE NEUVE DES CAPUCINES,
PARIS, March 18th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—Claude Bernard, of whose death I informed you in my last letter, was born in 1813, near Lyons, and of humble parentage. After having received a very moderate education, he commenced life as an assistant to a druggist, and devoted himself for some time to the rinsing of vials and the preparation of compounds in a back office. Becoming disgusted with this occupation, he determined to try his fortunes in Paris—the goal of every Frenchman's aspirations—believing that a five act tragedy which he carried in his pocket, would open for him a sure and short route to fame and riches. Fortunately for science, this expectation proved the vainest of delusions, and the disappointed author took up his residence in the "Latin Quarter" as a student of medicine. How he managed to exist and to pay for his inscriptions, during this period of his career, is a mystery, but it cannot be doubted that he was subjected to trials and discomforts which would have broken the spirit and paralyzed the energies of any ordinary man. Bernard, however, rose superior to the difficulties of the position, and ultimately graduated with distinction as a doctor of medicine.

It seems that his first ambition was to be a surgeon; but having by a lucky chance become an assistant in the laboratory of Magendie—the great pioneer in experimental physiology—he grew enamored of that field of science and determined to consecrate his life to its cultivation. From that time forward his career was "upward and onward"—honors flowed in an unbroken stream upon him and even *confréres* vied with each other in acknowledging his merits and in rewarding his achievements.

In 1849 he was awarded the grand prize in experimental physiology for his work on the pancreas. In 1853 after an unusually brilliant examination, he took the degree of Doctor of Sciences. In 1854 he was elected member of the Institute and nominated Professor of General Pathology in the Sorbonne. In 1855 he was named Professor of Experimental Medicine in the College of France—succeeding his distinguished master and securing a position for which he had faithfully worked through a long series of years. Subsequently he was elected a member of the Academy of Medicine, created a commander of the Legion of Honor, elevated to the chair of General Physiology at the Museum of Natural History, honored with a seat in the Academy of France, and nominated Senator of the Realm by a Soverign to whose reign his triumphs had contributed some of its most resplendent glories.

Of his labors and his triumphs it is impossible now to speak in detail. Every physician, however, is familiar with his discoveries in connection with the nervous system, the phenomena of life, the action of poisons, the offices of the pancreas, the functions of the liver, the rôle of the vaso-motor system, the physiology of the cranial nerves, the principle of recurrent sensibility, the forces of the circulation, the laws of the glandular series, and the many other important additions which his genius has made to the sum of human knowledge. His famous inaugural discourse on the experimental method produced a sensation throughout the domains of science; his magnificent contributions to the *Annales de l'Académie des Sciences* have been read with admiration and delight wherever medicine has a votary: and his great works, such as "*Leçons de Physiologie Expérimentale*," "*Leçons sur les Substances Toxiques et Médicamenteuses*," "*Leçons sur la Physiologie et la Physiologie du Système Nerveux*," "*Leçons sur les Propiétés des Tissues Vivants*," &c., &c., will remain the classic text-books in the medical libraries of all civilized nations through successive generations.

The funeral services of this illustrious man took place just one month since, at the public expense, and was a most imposing ceremony. St. Sulpice was crowded, not alone with distinguished representatives of the profession which he had so signally adorned, but with the leading statesmen, savants and soldiers of France—who came to pay their last tribute to one whose services to science and humanity had secured for him a conspicuous place in the history of the race, and reflected eternal honor upon the land which gave him birth.

It has been said that Claude Bernard was "no orator." It is true that he lacked that fervor of diction and that trick of manner which are usually denominated eloquence; but to me he was the most attractive lecturer that I ever listened to. Although more than twenty years have elapsed since I first had the pleasure of hearing him, the impression left upon my mind is as distinct as if it were made but yesterday. He had then just commenced his career at the Sorbonne, and was engaged in the task of demonstrating the glycogenic function of the liver—an investigation which he pursued with special zest and regarded as one of his greatest achievements. As was the custom in those days, he remained seated whilst delivering the strictly didactic portion of his lectures, and only rose to his feet when it became necessary to elucidate his theories by experiments upon the inferior animals which were provided for the purpose. Possessing a commanding figure, a classic face, a splendid head, a manner at once dignified and simple, he *looked* the "great teacher" more than any man that I ever saw. It is true that a slight hesitancy of expression and confusion of ideas marred the beginning of each one of his lectures, and produced a certain feeling of disappointment among his auditors; but in a short time, having forgotten himself and become absorbed in his theme, he grew wonderfully clear, correct and copious alike in expression and in thought, and ended by completely enchaining and enchanting all who heard him. Betraying no excitement himself as he unfolded his argument, but growing more solemn and impassable as his hearers were carried away by the enthusiasm which it awakened, he seemed to lose his humanity in the inspirations of his mission, and to become the divine apostle of a new revelation respecting the laws of nature and the mysteries of the organism.

It was impossible to listen to his lectures or to witness his experiments without arriving at the conclusion that he was thoroughly honest and accurate. He demonstrated every proposition ; he followed his investigations to their legitimate conclusions ; he weighed and measured facts with absolute conscientiousness ; and he had no other ambition than to discover the *truth* and to proclaim it to his fellow-men. Those who knew him best declared likewise, that his private life was illustrated by a probity and a propriety worthy of the highest commendation. To great dignity of character he added a modesty of demeanor and a sincerity of conduct which won the admiration and respect of all with whom he came in contact. Although his genius so enriched the world of science, and notwithstanding the wealth of honors of which he was the recipient, he died poor, having exhausted his earnings in liquidating the debts of his parents—for which he was in no wise responsible.

Such was the career of Claude Bernard—the great physiologist, the popular teacher and the good man—and it is well worthy the faithful study of every member of our profession, since it shows to what a height of grandeur and degree of excellence the humblest physician may attain by a life consecrated to earnest labor, high resolve and unfaltering honesty.

Professor Sée has just communicated another of his discoveries (?) to the Academy of Medicine. He announces with great emphasis that the iodide of potassium is a specific for asthma, and that the iodide of ethyl is a remedy of scarcely less potency. Commencing with *twenty-two* grains of the iodide of potassium daily, he increases it up to *forty-five* grains daily, and continues the treatment for an indefinite period. Usually, however, at the end of the second or third week the paroxysms are ameliorated or controlled, and the dose is brought [illegible] *ty-two* grains, the quantity given in the first instance. The effects of this remedy upon the disease he states to be these : respiration becomes free at the end of from one to two hours ; the paroxysm is arrested in its development when the drug has been administered some hours in advance of its appearance ; the second attack is invariably prevented, and the orthopnœa and emphysema subside with or without the development of disseminated mucous râles. Inhalation of the iodide of ethyl, in quantities of from six to ten drops, several times during the day, has yielded in his hands equally satisfactory results. As regards the use of the iodide of potassium in asthma, I have only to say, that it has been recommended in every American text-book for the last ten years ; and, that, though it undoubtedly possesses value in certain forms of the disease, it is by no means a specific or a panacea. As asthma is in a majority of instances more of a symptom than a disease, and as it frequently depends for its production upon causes entirely dissimilar in their character, the assertion that any one agent possesses therapeutical properties in connection with it of universal infallibility, must be taken *cum grano salis*, from whatever source it may have come. I have not yet had an opportunity to test the virtues of the iodide of ethyl in asthma although prepared to do so for some weeks past. This substance—was, as you know, discovered by Gay-Lussac in 1825, and was first experimented with by Huette, who declared that " it produced upon him an immediate sensation of quietude and comfort, the respiratory movements being executed with greater facility and freedom ; and that a vigor was imparted to all the muscles, while the appetite was stimulated, the secretions were rendered more active, the pulse became fuller, and a feeling of increased mental activity and power was experienced." Professor Sée following the lead of Huette, first tried it upon persons in good health who were made to inhale from six to eight drops six or eight times per day, with the result of quickly experiencing a far greater facility of respiratory movement. Nothing like anæsthesia or somnolence was induced; the heart and the circulation remained undisturbed; and absorption went on as usual, as was exemplified by the fact that in ten minutes after the commencement of the inhalation iodine was discovered in the urine. He then tried it in *five* cases of asthma, *three* cases of cardiac dyspnœa, *two* cases of chronic bronchitis with difficult respiration, and *one* case of œdematous laryngitis, with marked advantage in every instance. The asthmatic patients were especially benefitted by these inhalations, and, hence, the glowing terms in which Professor Sée called the attention of the Academy to the merits of the remedy. Although "one swallow does not make a summer," and much must be credited to the peculiar temperament of the observer, I am inclined to the belief that the iodide of ethyl will take a prominent position in the therapy of asthmatic affections, and that Dr. Sée deserves the thanks of the profession for his investigations in regard to it.

I cannot leave this subject without referring to the fact that the late lamented Sir William Fergusson suffered during his late illness with severe attacks of asthma, which were undoubtedly *renal* in their origin. You will also, perhaps, be able to recall the circumstance that, in an exceedingly interesting article, published in *The Medical Times and Gazette*, Dr. George Johnston, of London, has called attention to the fact that asthma is not an infrequent concomitant of Bright's disease and has attempted to explain the phenomenon upon the theory of an interrupted circulation through the pulmonary capillaries occasioned by a spasm of the pulmonary arterioles which are stimulated to this excessive contraction by the influence of the impure blood upon the vaso-motor nerves and centres. Influenced by these teachings I have made it a rule to examine the urine for albumen in severe and protracted cases of asthma; and to be influenced by the indications furnished by the test-tube, in determining what remedial agencies to invoke. In paroxysms of renal asthma the hypodermic administration of morphia—which is so valuable a remedy in other varieties of the disease—is contra-indicated, since opiates tend to check the secretions of the bowels and the kidneys and to increase the blood contamination; while inhalations of the vapor of the nitrite of amyl or moderate doses of chloral hydrate and bromide of potassium in combination give the most satisfactory results. When, however, the urine is very scanty and the blood is consequently greatly contaminated by retained excreta the chloral hydrate may fail to relieve and may even add to the distress. Under such circumstances the dyspnœa can be most effectually relieved by the employment of those remedies which tend to the purification of the blood by promoting cutaneous and intestinal secretion, while the diet is appropriately regulated both as regards quantity and quality.

Hypodermic medication is still being vigorously pushed in Paris. The latest agony in this regard is the treatment of obstinate sciatica by subcutaneous injections of nitrate of silver. Dr. Auguste Dureau, who is the special advocate of this mode of treatment, concludes his thesis on the subject with the enunciation of the following propositions, viz: that injections of nitrate of silver should be tried in all old and obstinate cases of sciatica; that these injections when made in the depths of the tissues are not to be feared, since they do not produce abcesses; that the cure or marked improvement is always very rapid; and finally that this method is less alarming and much more efficacious than that of the hot iron. There seems to be some difference of opinion in regard to the strength of the solution and the number of drops to be injected. Dr. Damaschino employs a twenty-five per cent. solution in doses of five drops; Dr. Luton varies the strength and quantity of the solution, sometimes using from twenty to twenty-four drops of a ten per cent. solution, and at others the same quantity of a five per cent solution; Dr. Bertin injects from fifteen to twenty-five drops of a five per cent. mixture; and Dr. Gerin-Roze uses a fifteen per cent. solution in injections of fifteen drops. It seems to be generally agreed that success follows this treatment in some severe cases, and that, with proper care, no unpleasant results are produced. The canular of the syringe should be inserted just at the point in the nates at which the nerve makes it exit, and carried deep enough to penetrate the dermis.

The injection of chloroform under the skin is also being again urged by Dr. Ernest Besnier. According to him, pure chloroform can be injected into the cellular tissue beneath the skin without the production of any local accident or severe pain and with the result of securing all the soothing effect of morphia, whilst the patient is exposed to none of the inconveniences or dangers which associate themselves with the use of that drug. Whilst a number of distinguished physicians here declare, that, according to their experience, local accidents frequently ensue notwithstanding the most careful introduction of the chloroform, they all admit that it sometimes relieves local pain very promptly without producing any impression upon the system at large. The general opinion, however, seems to be that this remedy is likely to have only a limited range of employment and that it is not destined to take the place of injections of morphia, as its advocate so confidently believes.

In this connection I can but say, that I have seen astonishing effects, both local and general, produced by the subcutaneous injections of *pure water*. In many cases of fever I have relied exclusively upon repeated injections under the skin of iced water for the purpose of reducing the temperature, and have succeeded admirably with them. It is astonishing how readily and with what little local disturbance a considerable quantity of water can be thus introduced into the system; whilst, with a single ounce I am confident of my ability to induce a more decided and prolonged abatement of heat in any ordinary case of fever, than can be effected by a cold bath or any reasonable dose of quinine.

In cases of insomnia, I have seen injections of water induce sleep as readily as morphia ordinarily does; and for the relief of pain of all kinds and in every locality, I have successfully resorted to this special treatment in a great number of instances. Only recently, while attending a gentleman in this city who was suffering with a most painful disease, I used injections of water and injections of morphia, sometimes alternately and then again indifferently, with the result of producing both anodyne and hypnotic effects with equal certainty. When called upon by him to explain this action of water upon the system, I told him frankly that it was impossible for me to do so—that whilst convinced by my own senses and his experience of the fact of its remedial effects, I could not fathom the rationale of its operation. Can you or any one of your readers give an intelligent answer to his enquiries?

The great Exposition which is to open here in May is now the absorbing topic of interest. As drugs of every description, surgical instruments and appliances, ambulances and their outfits, hygienic appliances, and a multitude of objects in regard to which professional men only are capable of forming a correct judgment will be liberally displayed, all the nations of Europe have selected prominent medical men for positions in their commissions. It is earnestly to be hoped that our country will have the wisdom and the tact to do likewise; but from the immense number of politicians who are seeking these appointments, I greatly fear that physicians will be overlooked in this regard, and that we shall be without proper representatives in one of the most important departments connected with the Exposition.

Very truly and respectfully yours,
EDWARD WARREN, (BEY) M. D., C. M.

OUR NEW YORK LETTER.

15, WEST TWENTY-SIXTH STREET,
NEW YORK, March 18th, 1878.

N. Y. OBSTETRICAL SOCIETY: *Fœtal Hydro-Nephrosis; Remarkable Ovariotomy; Ovarian Corpuscles not present in all Ovarian Cysts; Effect of Ergot in Inducing Inflammation for Uterine Fibroids, none being present; Carbolic Acid in Ovariotomy; Chronic Cystitis; Death from Ether. Incontinence of Urine; Artificial Dilatation of Urethra; Fissures of Neck of Bladder; The Hot Uterine Douche;* ACADEMY OF MEDICINE: *Billington on Scarlet Fever; Pathology; Treatment; Inunction; Inoculation, &c. Piffard's Diabetic Test. Funeral Rites of Similia Similibus.*

THE OBSTETRICAL SOCIETY met March 6th, at the residence of Dr. T. A. Emmet, whose vast and rich collection of old works, palimpsests and rare and beautiful books, ante dating the era of printing, afforded a lively interest, and attested the culture of that gentleman in directions other than that in which he is an acknowledged master.

Dr. Hanks read the details of a case, occurring in the joint service of himself and Dr. Lusk, in which labor was interfered with and delayed by great abdominal enlargement of the fœtus. The fœtus of a female was exhibited and the difficulty shown to have arisen from hydro-nephrosis, the result of imperforate urethra.

There was distension of bladder, ureters and cystic enlargement of kidneys, all consequent upon rentention of the fœtal urine. The contained fluids were of a colloid nature.

A discussion grew out of this as to the relations between congenital vesical fissure and imperforate urethra, two opposite conditions the first due to arrest of development, the two lateral folds failing to unite ; and the latter the effects of over development, leading to redundancy of tissue, mainly of the anterior urethral wall.

Dr. Emmet read the history of a most remarkable and instructive case of ovariotomy. The diagnosis was up to the moment of the operation a matter of doubt as between ovarian tumor and fibre-cyst. Repeated examinations of the fluid revealed the presence of no ovarian corpuscles, which are commonly regarded as a diagnostic indication of trouble in the ovary. There was difference of opinion among many eminent gynæcologists as to its nature, and the woman had been, prior to her coming under Dr. E.'s charge, treated with large and long continued doses of ergot. Dr. Emmet was arom the first inclined to the diagnosis of ovarian cysts. There were symptoms of peritoneal inflammation, which Dr. E. holds occasionally follow the administration of ergot for fibroids when none exist to receive the effect of the drug. Ultimately septic poisoning supervening, with fatal tendency, the operation was determined upon, the consultants, however, not being fully agreed to the procedure. It required two hours, and the tumor proved to be ovarian, with extensive adhesions, and full of putrid pus. The peritoneum was everywhere inflamed and adherent. Two carbolic sprays were kept playing into the incision and upon the peritoneum, with the remarkable effect that this membrane changed color, and upon completion of the operation *all traces of peritonitis had disappeared.* And, still more rəmarkable, when the patient recovered from the anæsthesia *no symptoms of septicemia remained.* Could Lister's system receive a more emphatic attestation of its efficacy. The patient made a speedy and good recovery, in spite of the almost hopeless condition. Your correspondent thinks in view of this case and the corroborative evidence furnished by others, of every kind and condition, that no surgeon should neglect to employ Lister's method, or some modification of it in all surgical operations known to yield even a small percentage of fatal issues. And the courts would be fully justified in attaching responsibility to surgeons for failure to use "that *due care and diligence*," of which the antiseptic method has become such an important integer.

Dr. Emmet presented the history of a case of chronic cystitis in a lady. This trouble had existed several years, and an effort had been made elsewhere to relieve it by dilatation of the urethra. This procedure left an incontinence of urine which superadded to the cystitis rendered life burdensome. The urine under chemical and microscopic query gave no response of kidney disease. An artificial vesico-vaginal fistula was made, under ether as the anæsthetic, but unfortunately the patient died of uræmic poisoning on the third day, never having fully recovered consciousness, and not a teaspoonful of urine having been excreted. The autopsy showed a contracted bladder, with small pouches of the thickened mucous membrane apparently protruding, hernia-like, through the muscular coat, the ureters were inflamed, enlarged in calibre and thickened; marked pyelitis; destruction of glomeruli and pyramids of one kidney; almost complete cystic degeneration of the excreting parts of the other kidney. All this was exhibited by well executed drawings from the specimen. It is difficult to apprehend how such extensive renal disease can exist, without giving any sign during life; and the death from ether was quite explicable upon the theory of the overwhelming effect upon a kidney already working up to its fullest capacity. It was thought that the *point de départ* of the disease was in the bladder, and by continuity it extended upwards, through the ureters, with the destructive result indicated. No ophthalmoscopic examination was made of the fundus oculi; but a prominent oculist present thought that advanced renal trouble was not likely to exist without inducing some recognizable changes in the retinal circulation.

Dr. E. availed himself of this case to express his doubts of the advisability of resorting to dilatation of the female urethra, since within the past year four or five cases of incontinence of urine, had come under his notice, and they may practically be said to be incurable. Dilatation of the urethra is a common recourse to facilitate the exploration of the pelvic contents; for the relief of cystitis; for removal of stone; and for treatment of fissures in the mucous membrane of the neck of the bladder. If it is proven to occasionally lead to permanent incontinence, a condition more distressing than the original one, there arises a question as to its remaining upon the list of warrantable measures.

In eleven dilatations made by himself incontinence followed in two cases, one of which was subsequently cured by slitting up the whole urethra and removing redundant tissue.

He attributed the incontinence to the cicatrices which followed the procedure, and which prevented complete occlusion of the urethra.

Dr. Hanks thought that ruptures and cicatrices of the cervical and urethral lining were favored by chronic inflammation, but that in the normal condition of that membrane these accidents must be very rare.

Dr. Noeggerath agreed with this view of Dr. Hanks, adding that in from 75 to 100 dilatations, made by himself for various causes, only two cases of permanent incontinence followed. Often perfect control was regained immediately, and always within two or three days the restoration of the *sphincter* was complete. Hence he thought that if alone for the value the operation possessed in facilitating explorations of the anterior uterine wall and pelvic contents it ought to stand as a justifiable one.

Dr. Emmet was surprised to hear Dr. Noeggerath speak of a *sphincter* in the bladder, as no sphincter exists in the female bladder. The power which women have of holding their urine is due to the falling together of folds of tissue and to the rugæ of the urethra. Complete occlusion by these folds is prevented when cicatrices form among them, and if incontinence follows dilatation even to the extent of two per cent., as indicated by Dr. Noeggerath's case, the operation is scarcely justifiable—incontinence being a most distressing condition, and practically incurable. Dr. Noeggerath in speaking of a sphincter wished to be taken in a physiological and not an anatomical sense.

Dr. Gouley, by invitation, expressed his views in reference to the dangers of dilatation, and said it was a question of the extent to which it may be safely done. He was disposed to adopt Dolbeau's rule of 13-16 of an inch for an average, and the dilatation may include both urethra and a part of the neck. He had dilated the female urethra four times without accident, for the removal of papillomata and for other causes.

Dr. Emmet expressed his preference for artificial fistule over dilatation, in the cure of cystitis, removal of stone and even for exploration. The difficulty was not to close up the fistula, when it should be thought necessary, but to prevent its immediate spontaneous closure. He pointed out that when after tedious labor vesico-vaginal fistula threatened to form from sloughing or laceration, often it could be prevented by keeping the bladder washed out and free from irritating deposits; and even after one forms the same course would induce its rapid closure.

Dr. Skene, the President, made inquiry as to the methods for recognizing fissures in the neck of the bladder. He was in the habit of using a special endoscope for the purpose, but said it could be done also by inserting a glass test tube in the urethra and examining the walls with a small laryngeal mirror. He did not doubt that many if not all cases of tenesmus and neuralgia of the bladder were due to fissures or other pathological conditions about the neck. He had tried all methods of treatment—dilatation, incision, nitrate of silver of various dilutions—success and failure following all.

Dr. Skene is a model presiding officer. Armed and equipped at all points, from his own experience and from his knowledge of the views of others, by a searching system of suggestion and inquiry he brings the members out, and thus contributes largely to the interest of the meetings, as may be inferred from this condensed report.

In the selection of presiding officer for societies, it would be well if the choice were always made on account of culture and administrative ability, instead of the mere accident of long membership. A hint which, I trust, may influence the State Society at its May meeting.

As germain to this, but not as a part of the proceedings above sketched, I would mention that Dr. Emmet holds fast to the efficacy of hot water in the treatment of pathological conditions of the uterus and pelvic basin. The position of the woman while using the douche is of great importance, the simple dorsal decubitus or sitting posture being improper. An examination of the anatomical relations will show why this is; how that the uterine veins return their blood to a system of veins in the pelvic cellular tissue, which are without valves. They are easily distended, favor sluggish movement of the blood current, and in this condition easily maintain an inflammatory and congested state of uterus and ovaries.

Nature makes an effort at relief by hyper-secretions, which it is useless to interfere with without recognizing and removing the cause. Here the hot douche aided by gravitation is eminently useful; and to secure gravitation of the blood from these overfilled veins, the woman must be in the knee-elbow position, or on her back with the pelvis raised high above the shoulders. To disregard this principle is to fail with the hot douche, even in cases to which it is particularly applicable.

ACADEMY OF MEDICINE, MARCH 7; Dr. S. S. Purple in the chair. Dr. Billington read an admirably written paper on Scarlet Fever, based upon 102 cases specially observed within the past year, and reinforced by experience drawn from other sources and from the whole course of his own practice. The paper was evidently written for the purpose of establishing a theory, which it may not be said was absurd but certainly unsustained by sound logical reasoning.

The theses were as follows: 1. Scarlet fever is primarily a purely local throat lesion; 2d. Systemic infection follows and is consequent upon the resorption of *materies morbi* from the throat; 3. the nerve symptoms, (restlessness, vomiting, convulsions, &c.,) the pyrexia and the eruption are probably the result of reflex irritation; 4. No change in the blood can be demonstrated, and hence the idea of scarlet fever being a blood disease is a pure hypothesis.

The observations bore evidence of having been carefully and thoroughly made, and doubtless they add to the clinical history of the disorder, although they do not warrant the logical inferences presented. Dr. B. declares that the first symptom in scarlet fever always and invariably appears in the throat, the palatine arch and tonsils showing a diffuse or punctate redness. This precedes the fever and every other symptom, is purely local and probably due to impact of the morbific agent, whatever it is, upon these parts. He maintains that the process initiated there is capable of setting up, in susceptible and irritable subjects, reflex disorders of every degree of severity, independent of the apparent mildness of the local lesion; and that even death itself, as in the so-called malignant cases, be may due to a profound cerebro-spinal disturbance caused by the angina, and not to the overwhelming blood poisoning and destruction of nerve centres, as is commonly held. It was not perfectly clear whether the author holds that the blood is subsequently poisoned from the products of the angina, for he distinctly stated that the entire train of symptoms, including the rash, could arise from nerve irritation alone; and adduced in support of this belief the phenomena of convulsions from dentition and worms, and the occasional urticaria from so simple a case as the ingestion of a single strawberry. But he likewise, in an earlier part of the essay, spoke of the morbid products of the angina as the cause of the later symptoms. Of course no support of this strange theory could be obtained in the bibliography of scarlet fever, though Meigs and Pepper, Ziemssen and Reynolds were quoted as in accord with the author upon certain semiological points. And as might be supposed there was little encouragement obtained from among the fellows of the Academy, only Dr. Peters venturing to agree with any part of the deductions, and he only to the extent of holding that the initial stage of scarlatina is always anginose.

Your correspondent ventures to express his belief that this even will not be universally or even widely accepted, as it is not borne out by experience, and he would here indicate that the common faucial redness and tonsillitis in children are liable to be regarded as early symptoms of scarlatina when they really are independent of it. It cannot be denied that primary angina does very frequently occur, but only as one feature in a scheme that has many features, and not as bearing any etiological relation to the others. And it is admitted likewise that the scarlatinal influence is capable of causing pharyngeal irritation to nurses and others who are long exposed to it.

Dr. Fordyce Barker could not agree with the conclusions of the writer, although the paper as a clinical record was an admirable and valuable one. He could not accept the doctrine that the prominent general symptoms were secondary to and the outcome of an angina. Scarlet fever was a blood disease *ab initio.*

The poison will survive potent for years (cases cited). Incubation—48 hours to two weeks. Sudden deaths occur from destruction of blood without any of the usual symptoms whatever. The relation between scarlet fever and diphtheria is uncertain; they may occur together, and may follow one another. Diphtheria was unknown in New York from 1815 to 1858.

Dr. Beverly Robinson pointed out that there was an anatomical difficulty in the ingrafting of contagium upon the velum and in the pharynx, as the very thick pavement epithelium covering these parts prevent absorption. Repeated experiments to inoculate with diphtheritic products in the throat have failed, and inferentially this fact opposed itself to the theory that the system receives the scarlatinal poison in that locality.

Nothing new was developed in the treatment—quinine and cold bath were recommended for the pyrexia; chlorate of potassium, carbolic acid and lime water prove a useful mixture. Differences of opinion expressed as to the value of innunction; and its effect in reducing temperature and allaying irritation received no attempt at explanation. Your correspondent in reference to this has long held the theory that a portion of the pyrexia is due to the oxidation which ensues upon the surface through the capillaries of the inflamed part; and this will be diminished if they are protected by a thin coating of oil; and for its antiseptic influence upon the patient, and for preventing the diffusion of the contagium which resides chiefly if not wholly in the dermal exuviæ, the oil should be carbolized.

It was held by all that scarlet fever is highly contagious, and may be conveyed by persons, but that the danger of its conveyance is lessened by free exposure to the atmosphere. When nurses go from cases of this disease into families where there are children, the entire dress ought to be changed and the personal ablution and disinfection should extend to the hair, particularly that of females which offers an excellent nidus for the poison.

Dr. H. G. Piffard presented a ready test for diabetic urine. It is the equivalent of Fehling's solution, and for its portability and promptness of action should be in the pocket case of every practitioner:

℞ Cupri sulphatis, gr. xij.; Sal Rochelle. ʒ i.; Sodii caustic. gr. xxiv.; m. ft. pil No. xij.

The pills should be made up without excipient, as most of the substances used for that purpose give reactions similar to grape sugar. Dr Piffard carries these pills in a small test tube, which just fits in another tube in which the test is made.

Put one pill in a little water (ʒ ss. to ʒ i), dissolve with heat, add a drop or so of the suspected urine; when if sugar is present the characteristic color instantly appears.

Our friends the Homœopaths are just now in the midst of an internicine strife of the severest character. Indeed their society may be said to have essayed *auto da fé,* but it dies hard, and every now and then some convulsive motion in one of the minor members indicates that it was once under control of a living, although evil principle. One meeting passed a very wise resolution declaring that it is the duty of members to follow the guide of experience, independent of the *Similia* doctrine, that this indeed ought to be the basis of the practice, but that failing as it did so often, it ought not stand in the way of a cure for their patients by some other method.

It was developed in the angry words which were used that but three practitioners in the United States (two in Philadelphia and one in New York) understood the Materia Medica, and we may readily believe this after being told that the administration of such a simple thing as lycopodium develops 3115 different symptoms. What powers of observation, close analysis and memory this trio must have. I conceive it to be strictly possible that a practitioner may be honestly misled by the homœopathic doctrine, but it is a mistake, in my opinion, to exclude him from regular professional intercourse because he holds this error. But if while publicly professing to practice upon the similia principle he secretly employs ordinary regular remedies the case is entitled to no consideration professional or social. Indeed this argument was used in abusing those who caught patients with homœopathic bait and treated them covertly with allopathic (sic) physic, and legal opinion was quoted to the effect that if any man, professing to practice homœopathy, should lose a patient to whom, in despair of saving him with pellets, he had given remedies ordinarily accounted good by regular practitioners, he would be liable to prosecution.

This was a frantic effort on the part of the deep-dyed homœopaths to alarm the others. It is clear the majority of our heretical brethren are now seeing the absurdity to which a strict construction of the heresy leads them, and we ought to be ready to welcome them to the truth whenever convinced of their honest conversion.

In one way they have had an unspeakable advantage over us in offering free physic to their patients; and we should watch with interest the efforts which Drs. Piffard and Fuller are now making to provide easy, economical and accurate methods of dispensing real remedies in a compact and palatable form. Once give us our physic in pellets, triturates and saturates, so that patients may be spared the mental emotion of the present dosing and the petty annoyance of drug bills, then may we hope to see the homœopath lose the hold which his gratuitous globules have given him upon the credulous public.

I cannot refrain from calling the especial attention of your readers to the action of the United States Congress in repairing, so far as lay in its power, the gross injustice which in the troublous time of war was inflicted upon that eminent Surgeon and Neurologist, Dr. Wm. A. Hammond. The congratulations in medical circles over this event is universal, for it has long been well known that the proceedings of the court by which he was removed from the office of Surgeon-General were instigated through low considerations, of a personal and political nature, and that the charges were sustained through a gross perversion of facts, possible only in those days when the government was ready to seize upon any one (the higher in station the better) as a propitiatory offering to the fury of public disappointments.

To Dr. Hammond's marvellous ability is doubtless due the present superior organization of the medical department of the army: for he entered office without a single stone to build upon, laying the foundation and indicating the design as it now exists of what is a model for all departments of the government.

I trust to be able at no distant day to furnish your readers with a sketch and engraving of this eminent Surgeon. DeR.

* * *

North Carolina doctors would do well to remember that persons practising medicine in this State since 1859, cannot collect their bills legally until they obtain the license of the State Board of Medical Examiners. Executors of several estates have to our knowledge refused payment of the doctor's bill on the ground that the practitioner was not legally licensed. This license is a protection to both patient and physician.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

M. J. DeRosset, M. D., 15 West 26th St., N. Y. } Editors.
Thomas F. Wood, M. D., Wilmington, N. C. }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* DeRosset & Wood. *P. O. Box 535, Wilmington, N. C.*

THE MANAGEMENT OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

For a number of years the management of our State Medical Society has not been such as to earn the approval of the body of the profession, principally we think because of the very grievous fault on the part of this very majority of the profession who are more apt at fault-finding than in lending their aid to make the Society what they conceive it ought to be.

It becomes our duty though in all candor to say that the management of the affairs of the Society has been too narrow. We mention in particular that the selection of Committees at our last meeting in Salem bore every evidence of having been managed with too little regard for the interests of the majority of members, who unfortunately arrived on the second day of the meeting. The working of the machinery seemed to be to carry out certain ambitious purposes, and this attained the literary offerings which cost so much labor to the working members were complacently tolerated.

This may be too harsh a judgment, but we are speaking the opinion of many members besides ourselves, uttered while the occurrences were fresh, and repeated to us by letter and personally since.

Committee making should be entirely subordinate to professional work, and should be as far as possible delayed until the presiding officer has full time to estimate the fitness of his appointments. The desire of the President to do this is too often defeated by motions, ill-advised and hasty, from members who are anxious to see the work rushed through. These are some of the glaring defects which deter some of our best physicians from joining heartily in the work with us, while apathy seems to have taken possession of very many more.

The remedy is obvious. Let each member go to the Society with some definite amount of work, showing the result of some of his professional experience for the year. Let each one be intent on the good he can do the Society and the aggregate of the result will earn for it such a position that membership will be sought by those who could not before see anything in us.

We have yet achieved no such great results that we can afford to manœuvre for the honors. Members with such aspirations would do well to consider how much better it would be to devote their talents to elevating the society.

The faults we have briefly mentioned are not confined to us, but seem to run parallel with those complained of in England, and we quote the following for the delectation of all whom it may concern, about the British Medical Association :

* * * "A small party seemed to have ruled the business, * * and controlled the organization of the Association. Every year at the great meetings and feasts of the Association, they have mutually admired each other on the platforms and at the high tables ; and they have apparently succeeded in persuading themselves that they are not only in the highest degree useful as well as ornamental, but in a position to act in the most autocratic manner, independently of the wishes and feelings of the members at large."

Our Society was chartered by the State and is for the regular profession of the whole State, and we must see to it that the talent which has been entrusted to us is properly employed. We have assurances of better things at our next meeting in May, and we believe it will prove to be the best meeting for many years.

UNIFORM QUARANTINE.

We give below some extracts from a very timely and earnest speech in the House by Hon. W. H. Felton, of Georgia, on the subject of a uniform national quarantine, and regret we have not space to say more, but hope to return to the subject again.

"The Committee on Commerce has considered the bill, seeking to establish a general and uniform system of quarantine by the Federal Government, the direct object being to prevent the introduction into the United States of contagious or infectious diseases, and after a thorough investigation they report unanimously in favor of its passage."

We have not seen the bill, but its objects are to conduct the quarantine upon such sound principles as will be merciful to the pestilence-stricken persons arriving at sea-ports, and making intelligent and safe disinfection of vessels and crews in the interests of sea-port cities as well as commerce.

"What has science, in the management of quarantine, accomplished in this direction? Let us take the quarantine at New York city, as described by Dr. Vonderpoel. In summer, when a ship arrives with yellow fever on board and from a port in which yellow fever prevails, the vessel discharges her cargo in lighters in the stream before going to dock, and is cleansed carefully, and her bilges washed, besides being thoroughly disinfected and ventilated, and by their hospitals and arrangements on Hoffman Island and Dix Island, and by placing those who have been exposed under circumstances favorable for the suppression of the disease, and those attacked being treated for it in a place suitable for cure, there results the least detention and fatality possible under the circumstances.

"All the advances made in the New York quarantine have had for their motive the reduction of the detention and annoyance of delay in cases of disease, while at the same time commerce should be as little embarrassed as possible. The health officer of the port is sustained in all his official acts by the commercial interests of New York which find in his pass a protection from the dangers to trade which would follow a commerce in which there was no sanitary restriction. Thus the apparently incongruous interests, quarantine and commerce, are united at this port upon a system which is satisfactory to and adequate for both."

The bill as we understand it is founded upon a careful examination of the quarantine, by Dr. John M. Woodworth, of the Hospital Marine Service. His views upon the subject have been favorably received by the profession as far as we are aware.

Mr. Felton's appreciation of the importance of a reformed quarantine is not more grateful to us than the manly words he has for the medical profession.

"I know it is customary with some to depreciate the suggestions of medical and sanitary science, denouncing them as empirical and the dreams of theorists.

"Let us remember they have always been in the forefront of progress, and that all which has been done for the prolongation of human life has come from that science: quarantine, vaccination, improved drainage, disinfectants, prophylactics, hospitals, character and treatment of disease; besides, it makes, subsidiary the whole world of scientific research, and when the nations are lifted from the pit of their ignorance and placed upon the pillar of their grand future no branch of human learning will have contributed more to its glory and happiness than medical science.

"Let us make the experiment, and if we fail it will be in one of the noblest efforts that ever science suggested or humanity prayed for."

REVIEWS AND BOOK NOTICES.

The Puerperal Diseases.—Clinical Lectures delivered at Bellevue Hospital. By Fordyce Barker, *M. D., Clinical Professor of Midwifery and the Diseases of Women in the Bellevue Hospital College; Surgeon to the New York State Woman's Hospital, etc., etc.* Fourth edition, 8vo, pp. xiv, 526; D. Appleton & Co., New York. 1878.

The rapid sale of three editions, the appearance of a fourth, its republication in Great Britain and its translation into several foreign languages entitle this work to more than a passing notice at our hands. Aside from its intrinsic merit the unique nature of the work alone would ensure for it a great popularity; for although the subjects it treats of have been ably handled by various authors yet no where else, in the whole field of medical literature, do we find them so conveniently collated and arranged under one cover. We should regret, however, to convey the idea that the chief value of Dr. Barker's book lies in its convenient form or in its special nature; since each chapter possesses features which if it stood alone would stamp it as the product of one who had much to say and said it well.

Embracing twenty chapters, or lectures, as he prefers to call them, it covers every conceivable condition that may be incident to, or follow as a consequence, upon parturition; and so thoroughly has this intent been pursued that even the purely surgical domain of gynæcology has been entered—an error (if one it be), which only adds additional value to the work. Passing over the earlier chapters on puerperal convalescene, hemorrhoids, laceration of the perineum, &c., all of which, however, are ripe with the author's accumulated experience, and valuable in removing the fetters which tradition puts upon our practice, we stop to consider those topics which have for a long time been, and still are the subjects of heated controversy. It is in these that Dr. Barker exhibits to the best of his mental *aplomb*, and the wide range of his knowledge, although it is possible we cannot hold with him upon some minor points in causation and pathology.

In Chapter VI, on Puerperal Convulsions, which follows properly that on Puerperal Albuminuria, the etilogical relation of these two conditions are pointed out, and a disbelief expressed in the discarded theory of Frerichs, of the conversion of urea into carbonate of ammonia. The surmise that to urea itself, as a narcotic poison, are to be attributed the phenomena of convulsions, although seemingly borne out by the experiments of Dr. Hammond and others, is hardly in accord with the fact that narcotic poisons do not, as a class, produce convulsions like those of the puerperal period; nor is it supported by the result of the experimental injection of large quantities of urea into the circulation of the lower animals. Venesection is highly spoken of under certain conditions, upon the theory that the absolute amount of urea in the blood may thereby be greatly lessened; and few practitioners there are who cannot recall cases of striking benefit from the timely abstraction of blood; but there are others also who will not fail to see that the Doctor's explanation is based upon an unsustained hypothesis, and point to aggravated cases of convulsions which recover without being relieved of one grain of the offending urea. Chloroform, morphia, bromides and purgatives, are all recognized at their full values; but chloral hydrate is condemned, as it is suspected of increasing instead of allaying nervous irritability. Liebreich's theory of its conversion into chloroform, the author rejects, because its physiological effects are so unlike those of chloroform (he does not say whether administered *per os* or by inhalation), and supports this view deduced from his clinical observations, by the negative results of Dr. Amory's experiments in searching for chloroform in the urine. after the ingestion of chloral. The conclusions of such an acute and analytical observer may be accepted perhaps without cavil as to the use of chloral in the nervous excitations of the puerperal state, but remembering the value placed upon this agent by alienists. and by Dr. Barker himself, it is well to be guarded against giving its condemnation too wide an application. Although we may not use, according to our author, chloral for the relief of nervous and muscular irritability, as expressed by the convulsive state. it still holds the high position it has always held as a safe and pleasant soporific.

The closing chapters in the book cover the various inflammatory and febrile affections of lying-in women, and constitute its most interesting part.

Every point is stated with admirable perspicacity and the differentiation between conditions so nearly akin as to lead to their frequent confusion, is made clear enough to enable any one. who studies our author closely, to discriminate with the utmost ease. The clinical histories and table given show how important it is that hourly accurate records should be kept by a competent attendant, and the author, although burdened with the labor of a vast metropolitan practice (for he is no contracted specialist but a general practitioner in its fullest sense) has indicated how he has thought it necessary to pass whole nights under the same roof with his patients. to meet those critical moments when life hangs poised in the balance.

On page 352, in speaking of mercurials in puerperal peritonitis, Dr. Barker expresses his astonisment that Hervieux, in his great work, should recommend inunctions of mercury, and says that "the so-called antiplastic and sorbefacient action of mercurials have no foundation in fact." Perhaps he had in view here active inflammatory formations and phlegmonous hyperplasms of an acute nature, and if so the statement is fully justified, for the use of mercury to prevent or limit these is absolutely without effect, and hence is to be rejected in puerperal peritonitis. But its beneficial influence in relieving the periosteal thickenings and other hyperplasms of syphilis, for example, is too well established for us to deny to it *all* antiplastic or sorbefacient action.

We apprehend that no portion of this book will excite a more useful interest than that devoted to the question of vascular sedatives, and think that the point is fully maintained of their adaptability to the treatment of puerperal fevers. The extreme stimulant, (or as we might call it) *astheniaphobic* school doubtless stand ready for this issue,and to demonstrate the author's alleged inconsistencies in theory and practice, basing their criticisms upon passages and statements isolated from the context. Thus on page 350, we find written: "the nervous forces are generally in a state of extreme prostration in puerperal peritonitis;" and on page 353: "puerperal fever is a disease which tends rapidly to destroy life by asthenia." And yet, say the stimulant men, our author, in spite of this, uses as his sheet anchor, a remedy which is markedly depressant! We accept the issue as thus made up, and think that it will be easy to show that there is not a single reason involved in what Dr. Barker has written to militate against the use of veratrum viride in the condition for which he so highly extols it. And it seems to us that only a misinterpretation of symptoms or a failure to recognize the relation of veratrum viride to the cardiac nerve supply, could enable any one to draw a parallel between the effects of this drug and those of venesection. This is hardly the place to re-open the question of exaltation or depression of the vital forces, as a primary concomitant condition in disease generally. We know that the tendency is uniformly to a depression. But the physiological *quantum* of vital power is not to be indicated by excessive or defective action of any one function, but only by the proper symmetrical expression of all. And so we may have a function exalted in its working not from actual loss of vital force, but through incidental and it may be exogenous causes, the prolonged operation of which certainly tends to exhaustion.

A simple instance of exalted action is the quickening of the pulse from emotional disturbances. Is it to be supposed here that this is due to loss of vital force? Evidently not; but equally evident it is that the tendency is towards a depression which will follow, if the cause remains long in operation.

It cannot be more distinctly pointed out than Dr. Barker has done it that veratrum viride is wholly unsuited to the state of exhaustion and collapse, indicated by feeble and rapid throbs of the heart and arteries. Here the conditions are the outcome of causes widely distinct from those which give rise to a vigorous, quick and frequent cardiac systole, and a hard corded and tense arterial pulse. The one calls for the use of vascular sedatives to calm the excessive irritation of the cerebro-spinal centres, by lessening the amount of hot blood sent to them, and the other demands the employment of diffusible nerve stimulants and cardiac tonics, to keep up a more abundant supply to the brain and cord, that their nutrition may be sufficient to afford the innervation necessary to all the functions which are essential to life. Of all the vascular sedatives we are quite sure that none are so well suited to the puerperal fevers as veratrum viride. It certainly has no general depressing influence, but a special effect upon the inhibitory cardiac nerves, quieting the excited heart, rendering its pulsations less frequent and more steady, and without diminishing the force, or, rather, the completeness of its contractions. When the arteries are small, corded and tense, it renders them fuller, softer and more compressible, and relieves the strain which their resistance entails upon the cardiac muscle. It is in no sense a depressant, like venesection, but on the contrary, performs the rôle of a tonic; and to those who are unable to reconcile the terms, sedative and tonic, as applicable to the same agent, we would state that the ideas are not really at variance, for there are many agents, of which veratrum is one (and for the puerperal fevers it is *facile princeps*), whose influence in giving tone is due to the sedation they bring to some one or other excited function. For if any is excited under the lash of a morbific cause it unduly depresses others whose full action is essential to that harmony which is the highest expression of vitality. No more than this can be said for quinia, which the opponents of vascular sedatives readily admit is theoretically as well as practically, a suitable remedy for the frequent pulse and pyrexia of the febrile state. And like veratrum, quinia if pushed to its toxic verge equally in degree if not in kind induces a general depression of the vital force. And so with alcoholic stimuli, with which the armamentarium of some theraputists seems to be inseparably bottled up. Since we now recognize that disease is not an entity, not a *daimon*, to be dealt with, so should we hold of *vital force;* it is not an actual thing, but only a convenient expression to denote the harmonious co-operation of many functions. If one is unduly exalted by the stimulus of a morbid principle, the general physiological relation is disturbed, and upon *a priori* grounds, it would seem proper to employ sedation to counterbalance the excess which existing in one tends to a total extinguishment of action in all. A sedative, therefore, applied to one function, may, in its effect upon all, be a true *tonic* to the vital force.

After all, the results of the treatment of puerperal fever and peritonitis with veratrum may well be compared with those of any other method. Its value is largely enhanced by association with morphia, as an adjuvant to secure rest and freedom from pain. The two drugs seem to promote the beneficial effects of each other, and reciprocally to restrain their respective pernicious influences, rendering possible the administration of enormous doses of each. Thus, the tables in the book show that the diurnal dose of morphia sometimes approximated eighty grains! ! But it must also be recognized that some diseases particularly puerperal peritonitis, develop a great toleration of both morphia and veratrum. A striking illustration of the benefit of combining remedies is given in a case in which neither brandy nor veratrum alone would lessen the fever, but when in combination the beneficial effects of the two, became apparent from the very first dose.

We have not space to enter in the examination of other valuable features of this book. The author has done everything well and placed us under lasting obligations for the draughts drawn from the deep and never-failing well of his own experience, and for tapping for us the currents of knowledge as they flow from every source throughout the civilized world. He gives due acknowledgement in the text for views of other writers, but has not swelled the pages of his book by a pedantic display of bibliographic references.

His style is lucid, simple, direct, and his language never leaves us in doubt as to his meaning. We note also with pleasure his reliance upon the efficacy of sound therapeutics, a refreshing consideration in his great field where the more meretricious knowledge of pathology plays such a predominant rôle.

The publishers have made the study of these pages easy, printing them in clear large type, and upon paper of a pleasing tint.

MEDICAL ANNOTATIONS.

THOMAS' OPERATION, (LAPARO-ELYTROTOMY) AS A SUBSTITUTE FOR CÆSAREAN SECTION.

The following description is by Dr. Thomas :

"The operation was simple and consisted of making an incision through the abdominal walls from the spine of the pubes to the anterior superior spinous process of the ilium, lifting the peritoneum, making an incision through the upper portion of the vaginal wall, lifting the body of the uterus over to the opposite side, and then, through the dilated cervix, delivering the child by version, by forceps, or by extraction. Delivery was to be effected by version in arm presentation ; by forceps when the head presented ; and by extraction in breech presentation. Hemorrhage was one of the things to be feared in the operation; but in five cases no hemorrhage had occurred, and why should it occur in future operations ? But, even admitting that hemorrhage occurred, it became a question whether the risks should not be taken, because the risk of peritonitis and shock following other operations were avoided. The dangers of Cæsarean section were peritonitis, metritis, hemorrhage, shock, incarceration of the intestines in the uterus and septicæmia. By the operation of laparo-elytrotomy the danger from peritonitis, metritis, and incarceration of the intestines was entirely avoided, and, in a great degree, the danger from septicæmia and shock was diminished. The operation might be followed by hemorrhage, and, in place of peritonitis, cellulitis might be developed. Dr. Thomas did not regard laparo-elytrotomy as yet an established standard operation, but he did regard it as an operation sufficiently tested by experiment to deserve a careful consideration at the hands of the medical profession."—*Medical Record.*

Number of Thomas' operations already performed,	5
Number of mothers now living,	3
Number of children delivered alive,	4

Dr. T. Gaillard Thomas concludes a paper on Laparo-Elytrotomy in the *American Journal of Obstetrics* for April, with the following summary :

1st. The operator should be provided with a pocket-case of instruments, ether, Barnes' dilators, and Paquelin's thermo-cautery, or, in place of it, ordinary cautery-irons.

2d. The patient having been etherized, she should be placed on a firm table, and the os fully dilated by Barnes dilator.

3d. The abdominal wound should be made ; the peritoneum should be lifted ; the vagina opened ; and the child delivered by version, if the head or arm present ; by extraction, if the breech do so.

4th. The placenta having been delivered, and the uterus caused to contract firmly, the iliac fossa should be cleansed by a stream of warm water, introduced through the abdominal wound, and escaping through the vagina ; and if the hemorrhage exist, ligatures should be applied, if possible through the abdominal wound, to the bleeding vessels. Should this prove impossible, the vagina should be distended by a large metalic speculum, and the lips of the abdominal wound being widely separated, the bleeding points touched by the actual cautery carried down from above. Should this fail, the uterus should be made to contract firmly by ergot, and both vagina and iliac fossa being thoroughly tamponed with cotton soaked in water and squeezed, but free from any styptic. Then a broad band of adhesive plaster, and a compress should be applied over the lower portion of the abdomen.

5th. Should no undue hemorrhage occur, the abdominal wound should be closed by interrupted silver sutures ; the vagina should be syringed out every five hours with warm carbolized water, the nozzle of the syringe being carried through the vaginal opening, and the fluid forced through that in the abdomen. The patient should be kept perfectly quiet, nourished by milk and animal broths, and kept free from pain by opium.

ACNE AND ITS TREATMENT.

The following abstract is from one of a course of lectures now being delivered by Mr. Erasmus Wilson. The lectures are published regularly by the London *Medical Examiner*, which by the way is a journal which satisfies the needs of the busy physician in a way that has not yet been equalled by any of its more pretentious contemporaries.

"To be exact, the definition of acne ought to be :—a folliculitis developed at puberty, consisting of a conical red pimple which either runs on to suppuration or degenerates into a chronic tubercle or absces. But as every follicle of the body, at every age, is susceptible of inflammation, and as the inflammation must necessarily pursue in all the same general pathological course, the error has arisen of calling almost every papular or pustular folliculitis, developed in an isolated form upon the skin, an acne. Thus it is that a folliculitis of adult life making its appearance on the face, is termed 'acne rosacea;' and the papular folliculitis which shows itself upon the system is permeated with the iodide or bromide of potassium or where tar has been employed either internally or externally, has also received the names respectively, of iodine acne, bromide acne, and tar acne.

"Acne requires for its therapeutic management a stimulant local treatment; together with a tonic and nutritive constitutional regimen. My own *local treatment* consists in friction combined with pressure and kneading of the skin, followed by inunction with *hypochloride of sulphur* ointment. To effect this the skin should be firmly wiped with a cloth, so as to break the heads of the pustules, bruise the papules and empty the follicles of their contents. This should be done at night. Then the ointment should be needed into the papules with moderate force and in the morning the skin should be washed with a profusion of soap and cold water. As it is no part of the treatment to increase the pain and suffering of the patient, this little procedure should be performed with judgment; but in general as it is left in the hands of the patient, it is not likely to be executed immediately. It should be repeated every night and kept up in the case of the pimples and tubercles until the whole have disappeared. That is to say the ointment should be limited as much as possible to the pimples and tubercles solely. Occasionally we may see reason, where the treatment appears to be too violent, to suspend it for a few days or longer; but the principle must be rigidly adhered to. Sometimes I relax the treatment and substitute the zinc ointment; but as soon as the skin will bear it, the latter should be resumed. In the treatment of acne anything like half way measures will fail.

"Friction and pressure discharged many of the follicles, but where there is a black comedonous plug it may be pinched off with the forceps, and squeezed, and for the puncture of serous or purulent sacs, a flat needle is to be prefered to a lancet.

"*Constitutionally* the nutritive power must be improved. Meat should be allowed in moderation three times a day [allowance should be made in this respect to the difference between our climate and that of England.—Eds.] and good sound beer for dinner and supper. Next we may propose according to the constitution of the patient:—cod-liver oil, iron, quinine, the phosphates of lime and iron, nitro-hydrochloric acid with a bitter and arsenic. [Trommer's or Dukehart's Extract of Malt with or without cod-liver oil, we can add to the above with confidence.]

"The special internal remedy in most of these cases is my ferro-arsenical mixture, containing three minims of arsenical solution to the drachm and administered at the end of a meal three times a day. While for external use, my compound hypochloride of sulphur ointment is the paragon of a remedy."

WILSON'S ACNE OINTMENT.

℞
Hypochloride of sulphur, ʒ ij.
Subcarbonate of potash, gr. x.
Lard, ℥ i.
Oil bitter almonds, gtt. x.
M.

THYMOL A GERMICIDE AND ANTISEPTIC.

The introduction of salicylic acid as an arrester of fermentation and antiseptic while it has disappointed the sanguine, has opened the way for seeking similar or greater properties in the vegetable world. Oil of thyme and its active principle thymol have been found by Bucholtz and Bälz in Germany to arrest fermentation and destroy bacteria. It is procured from the volatile oil of horse-mint (Monarda punctata) as well as from the common thyme (*Thymus vulgaris.*)

Its present source according to the *Medical Times and Gazette* (March 2d, 1878) is by distilling the seeds of *Ptychotis ajowan* an Indian umbellifer, which contains from 5 to 6 per cent. of their weight of this body. Its anti-putrescent properties were first distinctly pointed out by Bouillon and Paquet, of Lille in 1868. Dr. Lewin, of Berlin, was the first to point out its antiseptic properties, in the present surgical sense of the word. He showed that a solution containing one part of thymol in 1000 was sufficient to arrest saccharine fermentation, retard lactic fermentation, and arrest decomposition. It was the same chemist who showed the harmlessness of thymol where internally administered, and its power over fermentation in the stomach.

The chief value claimed for it now is its advantage in some respects to carbolic acid in the Lister method of antiseptic surgery. A thymol gauze is made by impregnating the gauze with a mixture composed of 1000 parts of bleached gauze, 500 of spermaceti, 50 of resin and 16 of thymol. (*Cosmoline* would make a good substitute for the spermaceti.) The advantage which the thymol has in this preparation is that it produces no irritation. It must be borne in mind that thymol is more volatile than carbolic acid.

Like all new drugs its cost is at present far greater than carbolic acid being $15 for two pounds and a half in the German market.

Thymol reduces the temperature in typhoid fever and acute rheumatism. It seems, however, that this new remedy will be rather an external than an internal one.

Oil of horse-mint which contains thymol, has enjoyed a reputation for many years in the South as an external application in rheumatism. Sometimes it goes by the name of "Origanum." (Thurber) corrupted into "Rignum" old-field Rignum tea as a sudorific is a choice remedy among the "natural" physicians.

Dr. Wm. T. Bull, of (*Medical Record*) gives the following formula for a solution of thymol:

℞ Thymol, 16½ grs.; Alcohol, ʒ iij.; Glycerine, ℥ ss.; Aquæ, ℥ xxxjv.

VALUE OF PEPTONE.

When an albuminous substance is digested with hydro-chloric acid and pepsine at the temperature of the body it becomes converted into "peptone"—that is to say, it has acquired properties which it had not before, and has ceased to be precipitable by heat or dilute mineral acids, though its chemical composition is apparently the same as true albumen. Professor Schmidt, of Dorpat, has shown that by removing the salts from albumen by dialysis the latter ceases to be coagulable on boiling, but recovers the property of coagulation on the restoration of the salts.

Dr. Adamkiewicz has tried to answer the question of the analogy of the behavior of albumen and peptone in the body, and its value as a food. He concluded that peptone is better suited than albumen for entrance into the animal juices, and elaboration by the tissue cells. Other experiments proved that peptone increases the body-weight as decidly as serum-albumen and egg-albumen. Hence, as peptone is as nutritious as albumen, and at the same time more readily assimilable, it follows that, as Adamkiewicz expresses it, "there must be indications for its therapeutic use." In the Berlin Charité Hospital, a female lunatic who had previously vomited everything she took, was treated with enamata, each containing peptone equivalent to about an ounce of meat. This quantity was absorbed by the bowels in a very few minutes, and as long as the enamata were continued the patient ceased to go to stool—a striking proof of the complete assimilation of peptone. Another woman similarly ceased to vomit when all albuminous food was withdrawn from her diet and replaced by peptone.—*Medical Times and Gazette.*

FILARIÆ IN THE BLOOD.

Several very interesting extracts by Dr. Manson, of Amoy, from the *Chinese Customs Gazette* have appeared in the *Medical Times and Gazette* on certain hæmatazoa. The life-history of these blood-worms has not yet been satisfactory studied, and it is, perhaps, premature to say anything about them at present. At a late meeting of the London Pathological Society, Mr. Coles showed a specimen of "Lymph-scrotum" from a patient in China with a history of the case. The condition was associated with the presence of *filariæ* in the blood, which organisms Mr. Coles described. Sir Joseph Fayrer said that the pathology of "lymph-scrotum" was first correctly described by Dr. Van Dyke Carter in 1861. He himself had described the same disease under the name of "nævoid elephantiasis," and suggested that it might be due to the presence of a nematode worm. Very soon after, filariæ were discovered in the fluids. The filariæ were of interest pathologically as well as surgically, for it was probable that cachectic malarial diseases would be found to be related to them.

Dr. Cobbold said that Wuncherer, of Bahia, had just discovered the filaria in chyluria. Two years later, Lewis found it in the urine in chyluria; and two years afterwards, Dr. Cobbold himself found it in a case from Natal. Still later Lewis made the discovery of the worm in the blood. But it was Bancroft, of Australia, that first saw the sexually-mature form. Dr. Bancroft, he understood, was now able to diagnose filarial disease in patients from the presence of small tumors in the arm-pits, face, etc. In one of his letters he had remarked that he should not be surprised if it were found that mosquitoes sucked up the filariæ. He had failed, however, to prove this; but Manson, of Amoy, had really and truly observed this, and had traced the various stages throughout. In one mosquito, Manson had counted as many as 120 filariæ in the stomach. Within its host the filaria threw off its outer tunic and became transformed into a sausage-like body; and thence it passed into a third form. Having fed upon blood, mosquitoes betook themselves to water, on the surface of which they deposited their eggs, living for five days only. By the end of this time the filariæ within them reached the length of one-thirtieth of an inch. From the water they found their way into man.

Mr. Coles also showed specimens of *filaria immitis* from the heart and œsophagus of a dog. The mature female worms were from eight to thirteen inches long; the male worm from five to seven. The worms resided in the right ventricle and extended thence through the valves, surrounded by a clot of grumous blood. About 15 per cent. of the natives of Amoy were believed to be infected with them. Dr. Cobbold thought the *filaria immitis* was not so harmless as it was represented to be. Mr. Coles said that *filaria sanguinolenta* resided in the œsophagus and aorta, whence it made its way into the neighboring structures setting up pleurisy, spinal disease, etc.—*Medical Times and Gazette*, March 16th.

COLLECTANEA.

M. PIERRE PICARD will succeed CLAUDE BERNARD in the chair of Physiology, at the College de France. M. Picard was for a long time Professor Bernard's assistant.

Renal Calculus containing Indigo.—Among the rarities presented to the March meeting of the London Pathological Society was a calculus containing indigo. The President, Dr. Murchison, said it was the first indigo-calculus on record.

Professor Annandale presented a patient at a recent (March 6th) meeting of the Edinburgh Medico-Chirurgical Society, who had suffered from writer's cramp, and who had been treated ineffectually by galvanism, and strychnia internally. Following the treatment of Dr. Bianchi, of Naples, he used subcutaneous injections of a solution of strychnia every second day. He used in all nine injections, of a solution the strength of the Liquor Strychniæ of the B. Ph.,* commencing with six minims and increasing the dose one minim until it reached ten or twelve minims. The patient had had his strength restored, and could now write for a considerable time.

ACKNOWLEDGEMENT.—We did not discover until too late to be inserted in the proper place, that we omitted to say, that we are indebted to that excellent medical periodical, the New Orleans *Medical and Surgical Journal*, for the AMERICAN MOUNTAIN SANITARIUM FOR CONSUMPTION.

Prevention of Puerperal Fevers.—The English medical journals call the attention of the profession in that country to what obstetricians are doing so well in Germany, viz : reducing puerperal infection to the minimum, by rigid adherence to cleanliness both on the part of the physician and the patient, by "Listering." (The *Medical Times and Gazette* says in Germany the verb Listern has been coined to express the use of Lister's method). The hands and instruments of the physician are primarily and thoroughly cleansed, and after delivery the vagina is washed out with a two per cent. solution of carbolic acid, the injections being kept up thirteen days, at increased intervals.

Spiegelberg at Breslau has carried out the antiseptic practice since 1874, and has had only *five* deaths in *nine hundred* labors. "Listering" has grown so rapidly with us, that bad odors in the lying-in chamber are confined to cases managed by midwives. It would be vastly useful if this practice would radiate to every quarter.

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*Ten minims equal one-twelfth of a grain of Strychnia.

BOOKS AND PERIODICALS RECEIVED.

The City Record. New York, March 7th, 1878. Giving the Annual Summary of the Bureau of Vital Statistics of the city of New York; From John T. Nagle, M. D., Deputy Register of Records.

What Am I? A valedictory address of the graduates of the Medical Department, University of Louisville, February 28th, 1878; By Professor J. M. Bodine, M. D.

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Trastornas del Aparato de la Vision en las Fiebres Paludeas, &c.; Per el Dr. Juan Santos Fernandez, Habana, 1877.

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Compulsory Vaccination. The establishment of a uniform system of Vaccination for all citizens and inhabitants of the State of Lousiana; by Prof. Joseph Jones, M. D. From the New Orleans Medical and Surgical Journal.

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Report of a Commissioner of Fisheries of Maryland, January, 1878, pp. 125. Six lithograph plates. Baltimore; Printed by King Bros., 162 West Baltimore Street.

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TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

Dukehart's Extract of Malt has already earned a reputation wherever used by physicians, and a trial of it will convince you that it is all it pretends to be. See advertisement.

The Bellevue Hospital Medical College has made some changes, due to the death of the lamented Peaslee. Read their advertisement.

Mensman's Tonic, is a genuine tonic in the strict sense of the word, besides being an elegant preparation, grateful to the most delicate stomach.

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Medical Society of the State of North Carolina,
Secretary's Office,
Littleton, N. C., April 17th, 1878.

☞ *The Meeting of this Society will take place in Goldsborough on Tuesday, the 14th of May,* 1878.

Arrangements have been made with the Railroads to pass physicians attending this meeting at reduced rates, but it will be well for those gentlemen intending to attend to apply at least a week in advance at the ticket office, so that there may be no mistake about proper orders having been issued from the offices of the General Ticket Agents.

The Board of Medical Examiners meet at the same time time and place. The license fee of the board, as fixed by law, is $10.

The State Board of Health will have important matters before it and hope to establish this new work upon a firm basis.

Dr. Chas. Duffy, Jr., of Newbern, will read, by appointment, a paper on "*Diphtheria and its treatment.*" Embracing the following heads: "*Determining Characteristics,*" "*Etiology,*" "Isolation, Disinfection and Fumigation," "*Identity or non-Identity of Diphtheria and Croup,*" "Treatment *including the advantages of Tracheotomy.*"

Every arrangement has been made for a pleasant and profitable session, and a full attendance is desired and expected.

L. J. Picöt, M. D., Secretary.

NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Editors.

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ORIGINAL COMMUNICATIONS.

TREATMENT OF CHRONIC AURAL DISCHARGES.

By Julian J. Chisolm, M. D.

Professor of Eye and Ear Diseases in the University of Maryland, and Surgeon in charge of Baltimore Eye and Ear Institute.

A Paper read before the Baltimore Academy of Medicine..

Chronic aural discharges have so long been an opprobrium to the profession that it has become the habit with many physicians to ignore their treatment. Let it alone and the child will outgrow it, is the stereotype professional phrase which I hear daily from parents who have exhausted their patience in awaiting this outgrowing. I have heard of cases of aural discharge lasting through a long life, literally from the cradle to the grave and never were discharged. These cases had also sought relief from more than one medical source and had derived great consolation from this oracular opinion delivered with that positiveness that ignorance alone engenders. Let it alone, it is a good vent for the system! Stop it and your lungs will suffer! Or if the patient be old enough he is made to rejoice in the knowledge that in this discharge resides his immunity from apoplexy, and he is thoroughly scared from seeking relief from this annoying companion, by having these words ever ringing in his ears. Check it at your peril.

The explanation for these two false positions so constantly assumed by even good practitioners is found in the recognized difficulty with which chronic otorrhœa is checked, even when carefully treated; and the impossibility of controlling it under the routine advice given to patients of syringing their ears, without being told how to do it.

If the pathology of aural discharges be understood and the rough anatomy of the ear kept well in mind, much of the difficulty which surrounds this important medical subject can be dispelled, and the successful treatment can be made comparatively easy.

In order to lay down a few simple rules for our guidance in the treatment of otorrhœa, we must recall the fact that the hearing apparatus has three natural divisions. The external ear and meatus from the drum-head out is covered by skin, continuous with that of the face, and is, therefore, a dermic tube, liable to the diseases which effect the skin proper. The middle ear, or drum cavity, with mastoid cell appendages, is a diverticulum from the throat, and is lined by the universal mucous membrane which faces all cavities of the body having an outlet. The susceptibility of mucous membranes to inflammation is enjoyed by the drum cavity in common with all other mucous sacs. The serous tissues of the closed sacs pass from the brain envelopes, through aqueducts, into the labarynthine cavities of the inner ear. Thus we have dermic, mucous, and serous spaces, all represented in the auditory apparatus, and of these the mucous is by far the most prone to take on suppurative inflammation.

There are three conditions known as otorrhœa or aural discharge, which differ widely in pathological significance. The first is an acute form accompanied by severe pain, some external swelling, and a stuffed sensation in the ear, with loss of hearing. After a few days and nights of more or less suffering, matter oozes from the ear; the symptoms subside, hearing is restored, and the patient feels quite well. This condition is known as furuncles or circumscribed abscesses in the lining of the external meatus, simulating boils upon the skin, which disappear of their own accord having run a rapid course. As an evidence of disturbed health, they are very prone to recur. Attention to the general condition of the system will correct this evil even should the ear be ignored, although hot soothing fomentations more especially when used as an adjunct to free scarification will rapidly expedite a cure.

A second condition is called *otitis externa*; a discharge from the dermic surface of the external ear, accompanied by much injection and swelling of the dermic lining. At first the discharge is watery, gradually becoming purulent. When the periosteum is involved, abscesses may form which may eventuate in necrosis of a portion of the bony wall, with fistulous openings, both within the meatus and behind the ear near the mastoid region. Although the continuance of these discharges depend much upon the general depression of the system and show a disposition to dry up as the body at large improves, the comfort of the patient is much enhanced by local cleansing and soothing applications.

When an aural discharge has been of long continuance, the diagnosis of *otitis media* may safely be made, and most frequently a history of acute aural catarrh of the drum cavity, usually called earache, can be traced. Its early condition was often an inflammatory extension of the throat, first causing injections and swelling of the lining membrane of the drum cavity, quite enough to close the eustachian opening and make of the drum a shut sac. The products of inflammation soon fill this small cavity. Then commences the severe suffering of internal distention and nerve pressure both upon the promontory and the drum head. Finally, rupture of the purulent collection, through the tympanic membrane by ulceration occurs, and the distressing symptoms which accompany the appearance of a discharge from the ear subside. In many cases of acute suppuration of the middle ear, rupture of the drum head brings the same relief as the bursting of the skin in the spontaneous discharge of a whitlow, and a rapid disappearance of the mucous congestion may permit the drum cavity to resume its normal conditions, including the closure of the opening in the drum head by firm and complete cicatrization. This consummation often obtained when the drum head is timely incised is by no means the rule, especially when the case has been allowed to run its own course, without the restraining advantage of judicious treatment. When such cases finally come under our observation we find a fœtid discharge of long continuance accompanied with very deficient hearing. An examination with the speculum in a good light will nearly always reveal the red exposed congested mucous lining of the drum cavity as seen through an opening more or less extensive in the drum head. This view can only be obtained after a thorough cleansing of the external meatus. Often the lining membrane of the eustachian tube, even to its opening in the drum cavity, has shrunk to such an extent as to allow air to pass through it freely, from the throat, and the forcible blowing of the nose may make the nose whistle ; a simple and sure means of diagnosing a perforation of the drum head.

In all such cases, the muco-purulent discharge, however copious, is the pathological excretion from the mucous lining of the drum cavity. It must accumulate in the drum before it escapes through the abnormal opening more or less extensive in the drum head, and finally finds its exit at the concha. This thick secretion must take some time to traverse this passage of 1½ inches in length, and often 24 hours is consumed before the secretion of one day makes its appearance at the outer orifice, as it has to be pushed forward by a later formation.

We all know that pus when first formed is a bland, innocuous, taintless fluid, organized like the blood with liquid and solid elements. The floating, fleshy particles, which we call pus cells, under the high temperature of the body, must, if retained, become as putrescent as would blood or flesh after a sufficiently lengthy exposure to a summer's heat. This decomposed fluid excoriates the surfaces which it overlies, and through a continuous irritation promotes the formation of more matter. The presence of the discharge keeps up the disease, or as we may more tersely put it, the running from the ear causes the running of the ear. Such are the cases to be found in the clientel of every active practitioner, who being wearied by their obstinate persistence seeks refuge in advising patients to put up with these diseases as a safe guard against more serious maladies.

In this connection I will make a very bold statement which any one can verify, viz : that cleanliness alone will cure many of these most obstinate cases of otorrhœa, and that really the question of most importance in the treatment of these disgusting affections, is how can we obtain this desirable cleanliness ? Washing with warm water will secure it if properly done ; and the mode of doing it when once known is found exceedingly simple. There is one point which admits of no question, viz : *that an offensive ear is a foul one, regardless of the number of times per day it is syringed.* Fœtid pus always means pus some time secreted,and which has had many hours to metamorphose itself from its primitive bland state to one of offensive irritating liquid. If the ear always contains fœtid pus it will continue to discharge whether its duration be months or years.

Successful surgery secures its greatest triumphs in close attention to little things, and the surgeon who wishes good results must see to it that all the detailed arrangements for carrying out his plans are understood. The aurist cures patients of chronic discharges which have so long baffled the family physician by a course of treatment identical in its wording with that previously used. Syringe your ear with warm water and use a prescription of astringent drops, are the instructions given by both family physician and aurist. The physician believes that he has done his full duty to his patient when he has advised the purchase of a syringe, and has written the prescription. The patient doing as directed, buys a glass syringe, because it is small, clean, and cheap, with which it is impossible to cleanse the ear. Let him throw in warm water as best he can, he leaves the drum cavity and the depressed portion of the meatus full of thick offensive pus, upon the top of which he instills a few drops of the astringent solution. Of course, there is no commingling of these thick and thin liquids. The astringent never comes into contact with the diseased surface and persistence in the application brings no good results. The aurist gives the same advice and writes the usual zinc and carbolic acid ear drops. But he goes further : He tells his patient to buy only the proper ear syringe that can be worked with one hand alone ; and of these the simple rubber bag is the best. He explains how the other hand must be used to straighten the passage, by drawing the ear upwards, backwards and outwards. Then he shows how the water is to be thrown by the syringe, downwards and inwards which will surely carry the stream into the very drum cavity and thoroughly cleanse it: pass in a bit of cotton on the end of a match after a few syringe fulls of warm water have been in this way injected into the ear, and it will bring out with it no foul odor and will appear free from all stain. After such a proper cleansing, let the drops be applied. Now they are brought into direct contact with the congested membrane, and will do the work designed.

The law then becomes imperative, *a clean ear must be the foundation for any treatment intended to arrest chronic discharge.*

As to the medication necessary, after the cleansing has been obtained, an ear drop consisting of sulph. zinc, grs. iij; carbolic acid, grs. iij. to ℥ i aqua is a prescription of general utility. When the discharge of very long standing does not yield to this application, the zinc may be changed for any one of the mineral salts used for astringent purposes. In some cases nitrate of silver in solutions of varied strength, will accomplish what the milder astringents failed to do ; and even with the caustic solutions, the heroic application of a liquid containing as much as 480 grains to the ℥ i. of water, has in a few very rebellious cases proved effective.

Of late years desiccating powders have to a considerable extent taken the place of ear drops. When salicylic acid was brought forward as a purifier of great potency I experimented largely with it as a remedy for chronic aural discharges. I used it in powder, diluted one part to three, with oxyd of zinc or calcined magnesia. This powder was blown into the ear, after thorough cleansing of the aural passage, and with a success sufficiently marked to warrant a publication of my experience.

In latter years I have substituted for this powder, alum, which I have found more efficacious than any remedy previously used. By means of it I have cured discharges of fifty years standing in one week, and I now find very few aural discharges, however chronic, that withstand its proper application. The method employed in using it is first to thoroughly cleanse the ear, then wipe dry the passage by means of a loose cotton swab made at the end of a match or special applicator ; after which puff into the ear powdered alum, *filling the drum cavity with it.* The very first application will often indicate a diminished discharge at the end of twenty-four hours. The ear is then washed out and the alum powder again applied. This treatment is renewed once a day until the discharge is so reduced that the powder blown into the ear continues dry upon its exposed external surface. If it has crusted in the ear, it may be left for days as a hard mass giving no pain and causing no annoyance. If after a week or ten days interval, the ear has seemingly stopped discharging the alum powder remaining dry, although in a cake it may be syringed out, as if it were a foreign body. It usually leaves a healthy mucous membrane behind it.

Since powdered alum is so constantly and successfully used by me in aural discharges, I find it convenient to apply it through a puff bottle which expedites much the insufflation, and is far preferable to a quill or pipe stem. In damp weather, I was formerly annoyed by the caking and lumping of the alum in the bottle which necessitated frequent drying and repulverzation. I now add to it, at the suggestion of my assistant, Dr. W. A. McDowell, a small quantity of lycopodium powder, which when thoroughly triturated with the alum, makes it more volatile and not at all disposed to lump: 10 grains of lycopodium to the drachm of alum is ample.

In my own practice I have ceased to consider chronic aural discharges an obstinate disease; for under the thorough cleansing and the insufflation with alum, I find they yield more kindly to treatment than any other affection that has been of long continuance. One advantage of no small merit in the alum treatment is, that it is incapable of abuse. An excessive application can do no harm.

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TWO CASES OF RUPTURE OF THE SPLEEN IN WHICH NO EXTERNAL WOUND OR MARKS SAVE A SLIGHT BRUISE WAS VISIBLE ON THE BODY.

By E. A. Anderson, M. D., Wilmington, N. C.

Some ten years ago an affray took place between two negroes, caused by jealousy in which one was killed, leaving no external marks of violence on the body. Charles, a negro, returning at a late hour to his house, found Romeo in criminal intercourse with his wife, and pursued him, seizing as he ran, an axe then lying on an adjoining wood-pile. Finding it impossible to catch him, he threw the axe with all his strength at Romeo. who was rapidly running away. The axe describing a curve, struck the fugitive on the right side with the end, he tottered a few steps, groaned and sat down on a log of wood for a few minutes, and then died. When the body was carefully examined, no bruise, laceration, or any external mark of violence was visible. A *post mortem* was held by myself, assisted by several other physicians. The brain was first carefully examined and found healthy—next, the thorax, in which all of the organs were sound. The abdomen was then opened, and the stomach, liver, kidneys, bladder and intestines were of a normal condition. The entire abdomen was filled with fluid and semi-fluid and coagulated blood. Upon sponging out and removing this, the cause of death was clearly visible. The spleen was torn half way intwo, and from this gaping wound the entire blood of the whole system was poured out, causing instantaneous death.

Charles was tried for murder, but was acquitted on the ground of justifiable homicide—the jury very correctly holding that the provocation excused the deed. Without this *post mortem* it would have been impossible to have formed even a conjecture of the cause of death.

Case 2.—During the spring of 1865, I had charge of a large United States Army Hospital, known as the Sherman Hospital, in this city. This was soon after the fall of Fort Fisher, which virtually ended the war, as it was the last fortified place then held by the Confederate Government. Schofield's army, some 15,000 strong, then held the city, to supply which numerous corps required large deposits of provisions and commissary stores. One of these commissary depots, was watched by a single watchman who was attacked by three negroes, knocked down and stamped on the left side, and left senseless while they plundered the commissary stores. The military patrol going his rounds found this poor unfortunate white man lying on the ground, groaning and breathing heavily. This was about day-break or six o'clock in the morning. The watchman was carried in an ambulance to the hospital and I was summoned to visit him. He seemed in much pain, could not speak, was insensible, and groaned heavily and soon after expired. He had no pulse at the time I saw him, no wound on the surface of the body, that could point to the probable cause of death, but was pallid as if all the blood had left the surface. The nature of the injury was revealed at the subsequent examination of the negroes who killed him. By the order of the Provost Marshall, I made an accurate and rigid *post mortem* of the body, and drew up a procés verbal, a detailed description of the case to be used in the military court, which at that time alone was cognizant of such cases. In this, I was assisted by Dr. Savage, of the United States Army, who also signed the procés verbal with me. The brain was examined and found perfectly healthy; next, the contents of the thorax, including the heart and lungs which were both perfectly sound, and the liver, bladder, stomach, and intestines were perfectly normal. Upon removing the stomach, liver and intestinal canal an immense amount of coagulated and fluid blood was found in the abdominal cavity, and upon searching for the source of the hemorrhage, it was found in the spleen which was torn in two, or ruptured through half its body. A court martial was held on the case, and as is usual "*inter arma leges silent.*"

The guilty culprits escaped justice and the great interest of this case was the sudden death from no external injury. Cause of death was revealed only by the *post mortem*.

TEMPERATURE OF THE BODY IN THE TROPICS.

Among the reports received by the Army Medical Department from army surgeons on service abroad is one giving an account of observations on the temperature of the body by Surgeon-Major J. Crosse Johnston, M. D., in medical charge, 43d regiment. He states that the normal temperature of the body in temperate climates is given in text-books as being about 98·4° in the axilla and that Dr. Beecher's observations, quoted by the late Dr. Parkes, indicate an increase under exposure to high temperatures in the proportion of 0.5 Fahrenheit for each degree of increase in the temperature of the atmosphere. Dr. Johnson at Bellary, in September, 1876, with the mean temperature 81.7 deg., made observations night and morning for seven consecutive days upon 16 men in fair health, and who had been not less than three years resident in India, and he found that the heat in the arm pit had a mean of only 97.63 deg. which is not only below what would result from the application of Dr. Beecher's formula, but actually less than the standard of temperate climates. Some doubt having arisen as to the accuracy of the thermometers employed, very careful supplementary observations were made, and Dr. Johnston states that 320 readings showed a mean of 97.74 deg., nearly corresponding with the result first obtained. It would seem, therefore, that the temperature of the body is rather less in inter-tropical than in temperate climates.—*London* (*Weekly*) *Times*, Feb. 1st.

LEUCODERMA.

Syn. *Leucopathia.*
Vitiligo.
Achromia.

By Thomas F. Wood, M. D., Wilmington, N. C.

Whether or not leucoderma is on the increase since the emancipation of the slaves there is no means to determine, at any rate more attention has been called to it in the last few years, and more cases have been observed on our streets.

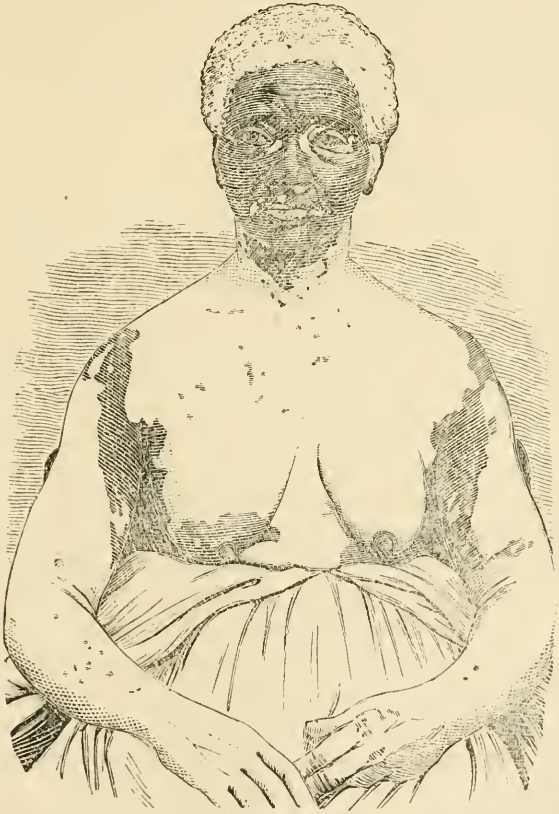
In the London *Medical Examiner* (July 19th, 1877) I reported a case which so far as I know is unique, and as it has not been published in this country I will reproduce it with such additional information as I have gained.

"A negro, J. C., æt. 40; very black, thick lips, strongly marked African features, had typhoid fever in 1866, from which he convalesced very slowly. His poor health continued until the early part of 1867; patches of leucoderma made their appearance symmetrically on his hands and arms, then on his face, and lastly on his body. The question as to previous syphilis was answered negatively. For several months in the years 1867 and 1868 his eyes were so intolerant of light, and his skin so sensitive to the hot sun, he had to give up his occupation—that of a sawyer.

"His face and hands by the end of 1873 had become almost as bright as those of the brightest mulatto; also the scalp in large patches as well as the hair. The nasal tract within sight was bare of pigment.

"He passed from my observation until the 20th of October, 1876, when he was again closely examined, and it was discovered that redeposit of pigment was going on in the same order in which it was absorbed. He could read under a bright light, and was about his ordinary duties in the saw-mill, although his health was not vigorous. I regretted very much I was not able to get a photograph of this patient in the different stages of the disease, but I was unable by persuasion to get his consent. Steadily since the above date there has been a re-deposit of pigment going on, so that in some of the earlier spots the color is nearly that of the sound skin surrounding it."

Since that date I have had opportunities to examine this patient, and find that the re-deposit of pigment seems to be going on slowly, but that his strength is far from being what it was. This infirm condition I am not inclined to attribute to the disease, but if it continues I will expect to see the leucoderma increasing in area.



Another case reported to the same journal has been under careful observation since. She is a negro woman of about fifty-two years of age, who has enjoyed a fair degree of health up to the present date. Her family history, if any reliance can be placed in the account, is good. About thirty years ago she remembered seeing the first white patches commencing on her hands. The accompanying cut gives her appearance about two years ago, since which time there is little of the original black to be seen except some fading patches around the nose and cheeks, giving her the appearance of a white woman with black stains upon the skin. This symmetry of absorption is most beautifully shown here. Her original color as seen in an ambrotype taken when she was young shows her skin to have been very black. The clear white skin now can hardly be described, and so sensitive is it that by continued exposure to the summer sun it readily blisters.

This patient, has had no attack of sickness for ten years, but is becoming more and more liable to stubborn attacks of epistaxis, and myalgic pains in the lower extremities. This latter symptom is due to exposure, bare-footed. The epistaxis is not to be wondered at, for the entire nasal tract is bare of pigment, presenting much the appearance of having been denuded of its cuticle. The olfactory sense seems to be perfectly good, and does not confirm Mr. A. R. Wallace's statement in *Nature* (Sept. 7th, 1876), "that colored or dark pigment in the olfactory region was essential to perfect smell."

This case has been examined with special reference to acquired or constitutional symptoms, but they have not been found,—confirming the statements made by the patient. There seems to have been no dermatitis at all, and the skin is as functionally active as in ordinary health. There is no photophobia as in the first case, and no alteration in the pigment of the eye.

Dermatitis produced artificially by a vesicant in the negro and mulatto has a varying after-effect; in some cases, particularly if mustard has been used, there is nearly always a staining of the skin: while the cicatrices resulting from scorbutic ulceration, syphilitic rupia, and small-pox, as we would be led to expect, are marked by white patches. It is less uniformly the case that small-pox cicatrices are lighter than the surrounding skin, and perhaps a careful collation of the cases would prove the contrary. In many of the lighter mulattoes the margin of the small-pox cicatrix is darker, while the centre is several shades lighter than the surrounding skin. It can hardly be inferred, therefore, that leucoderma results from dermatitis, as held by some dermatologists, as dermatitis in some cases causes pigment deposit and sometimes pigment destruction or absorption, and therefore we must look elsewhere for a solution of the problem.

There is a wide-spread opinion that this disease bears some relation to leprosy, but this opinion is a popular one, and not held by physicians. I am convinced that many of the cases supposed to result from syphilis are not true leucoderma, but cicatrices resulting from destructive syphilitic ulceration of the skin as in rupia and ecthyma.

This disease has so little effect upon the general health that there is less interest attaching to its solution than would otherwise be the case, but following the indications held out in the symmetrical disappearance of pigment, we will, probably, in discovering the organs at fault, be able to determine which organ or set of organs preside over the important functions of pigmentation.

As Bright's disease was the starting point of much of our present knowledge of the physiology as well as of the pathology of the kidney, so the study of leucoderma may reveal to us functions of the skin not now appreciated, and put at rest the present doubtful relations which the supra-renal capsules bear to pigmentation.

A CASE OF URÆMIC CONVULSIONS AT END OF EIGHT MONTHS; NATURAL LABOR AND BIRTH OF A LIVING CHILD AT TERM; WITH SOME GENERAL REMARKS UPON THE TREATMENT OF PUERPERAL CONVULSIONS.

By James Parrish, M. D., Portsmouth, Va.,

As the occurrence of convulsions during the latter part of gestation is still frequently considered an indication for the induction of labor, the following case may not be without value.

At 11½ P. M., January 30th, 1878. I was called to see Mrs. H. E. J., age 23, a robust primipara advanced to about the end of the eighth month. She had been seized with convulsions an hour and a half before my arrival and had undergone in that period, according to the report of an intelligent nurse, five severe convulsions. The patient was found in a profound stupor, with stertorous breathing, respirating rate twenty-four, pulse 96, skin hot and dry. There was general dropsy of an extreme degree, the face and upper limbs being greatly swollen, as well as the lower extremities. The convulsions had been preceded for several hours by those two symptoms so characteristic of acute uræmia, agonizing frontal headache and obstinate nausea and vomiting.

A vaginal examination revealed a tightly closed os and a long and conical cervix ; the head could be plainly made out through the anterior uterine wall, but there was no indication of any attempt at uterine action. Some three ounces of dark urine were withdrawn by catheter, and thrown away by a stupid servant before I had an opportunity to test it. Prior to the examination the patient was placed under the complete influence of chloroform in order to diminish the danger of exciting another convulsion ; but the examination concluded and the bladder evacuated, there was no further resort to the use of this agent.

At 12 midnight, morphia gr. ⅓ was administered hypodermically.

1 A. M. Convulsion ; morphia gr. ⅓ hypodermically. Then followed a lull of four hours the patient sleeping quietly, the respiration maintaining its former high rate.

4 : 50 A. M. Convulsion ; morphia, gr. ⅓ hypodermically.

6 A. M. Convulsion ; morphia, gr. ⅓ hypodermically.

7 : 20 A. M. Convulsion ; morphia, gr. ⅓ hypodermically, and an enema of ʒ ss chloral hydrate. Soon after this last injection the hitherto dry and hard skin broke into a warm perspiration. There were no more convulsions ; in the afternoon the patient began to recover consciousness, and was able to take milk in fair quantities and at suitable intervals.

It will be seen that one and two-thirds grains of morphia were administered hypodermically, to a patient perfectly free from the opium habit, in a little over seven hours, yet the high respiration rate was maintained throughout. I admit that my faith in the plan of treatment began to fail with the repeated recurrence of the convulsions in spite of the repeated injections of morphia, and I almost determined after the fifth injection to give morphia no more,—hence the enema of chloral. What share this last agent had in the result is, of course, past finding out. As for myself, having seen chloral utterly fail in a former case of uræmic convulsions coming on before labor, I doubt that it was even a "last hair."

On the next day, and on every day during the following fortnight, there was an evening return of the frontal headache and nausea. Both symptoms promptly yielded to the administration, by the mouth, of a morphia gr. ¼ and chloral gr. xv draught, though on some evenings it was necessary to repeat the dose once or more. The marked periodicity of these attacks, of course, suggested the use of quinine, but although it was pushed nothing came of it except cinchonism.

Under rest in bed a rigid milk diet and the use of morphia and chloral as above noted, there was a gradual increase in the flow of urine and sometimes diminution of the dropsy, though the patient remained markedly anasarcous until after delivery. No effort was made to treat the uræmia by more direct means, except an attempted diversion with the compound jalap powder. ʒ i in the morning. This was so plainly detrimental that it was speedily abandoned.

Finally, on the 24th of February labor came on and a healthy female child was born in about twelve hours without other assistance than the use of chloroform during the second stage. After delivery the dropsy and albuminuria rapidly disappeared, convalescence was uninterrupted and rapid, and at the present writing mother and child are "both doing well."

The outcome of my not very extensive experience in puerperal convulsions is a decided suspicion that they do not furnish sufficent reason for interrupting the course of gestation ; and that those which come on during labor should not, as a rule, cause any marked change in the management of the labor. In these last cases I only interfere, quoad the labor, for reasons furnished by the labor itself. In my opinion a very important part of the treatment of puerperal convulsions is the avoidance of the shock and nervous perturbation that attend forced delivery in a greater or less degree, especially when it involves forcible dilatation of the cervix, or rapid evacuation of the womb as in turning ; to the use of the forceps, when the os is dilated and the head fails to make satisfactory progress, there is far less objection. In truth, convulsions are merely a functional nervous disturbance, a displacement of nervous energy, so to speak, and the treatment should be directed to the convulsions, not to the pregnancy or labor.

Post partum convulsions are almost always caused by shock and exhaustion ; in my own observation they have had a suggestive association with twin or other exceptionally severe labors, with one striking exception. In this, they followed a remarkably swift and easy labor in a primipara of fine physique. It seemed that the accumulation of potential nervous energy which takes place in anticipation of the demands of labor was not nominally expended, and discharge took the abnormal and dangerous path of convulsion. I have found morphia the remedy for *post-partum* convulsion of whatever kind.

It is quite certain that many cases of puerperal convulsions are not really uræmic. In the hyper-charged state of the motor centres of the cord that obtains in the latter part of gestation, convulsions may be determined by an infinite variety of causes; a fit of indigestion, gall stone colic, in fact, any kind of sensory or physical perturbation. It is to be remembered that convulsions soon determine albuminuria; and possibly the presence in the urine of some forms of casts,—independent of any preëxistent kidney affection. Only those cases should be called uræmic that are attended by those symptoms which we know accompany convulsions from acute kidney diseases in the non-pregnant state;—scanty and usually bloody, as well as albuminous, urine, and *general* dropsy of the subcutaneous connective tissue. Uræmic convulsions too are usually preceded by obstinate nausea and vomiting and a frontal headache so intense as to overwhelm the self control of the patient.

The profession is mainly indebted to Dr. A. E. Loomis, of New York, for a just appreciation of the great value of morphia in the treatment of uræmic convulsions and coma. The extent of my belief in his method may be inferred from the case related; I have had the opportunity to verify the soundness of his plan not only in the pregnant and puerperal states, but also in the causally less complex convulsions of scarlatinal nephritis.

To control some cases of uræmic convulsions may require a rather heroic use of morphia, and it goes without saying that in emergencies of this kind one practitioner may abandon the plan of treatment sooner than another, with a possible result, in a given case, of failure for the first, success for the second. It is certainly feasible to kill even the subjects of grave uræmia with morphia, yet, whilst the respiration rate is at or near—and a fortiori above—normal, the continued use of morphia is almost safe. In estimating the effect of a method of treatment that is being employed in a case, the prior duration of the disorder is a very important factor. As in other neuroses, the tendency to recurrence increases with every repetition of the disordered act, so that a case that has had five or six convulsions before coming under treatment, is very apt to have several after, in spite of the highest of high art. So when convulsions are threatened, and the prodromata in uræmic cases are frequently very characteristic, their development may be prevented by doses of remedial agents totally inadequate after their establishment; witness the repeated threatenings of convulsions in the case related, and their prompt suppression by doses out of all proportion less than those required in the seizure.

In non-uræmic convulsions, dynamic, as Barnes calls them, I fear that morphia is of less value, except in *post-partum* cases. Even purely dynamic convulsions before and after delivery are not exactly the same thing; in the former there is the irritability of surcharge of the motor centres, in the latter, almost always, the irritability of exhaustion.

Some years ago, in a case of dynamic convulsions coming on before labor, I saw morphia so reduce the respiration rate as to forbid its further employment, yet the convulsions persisted and went on to death; whilst of the brilliant success of morphia in *post-partum* convulsions of the same class—dynamic, I can recall several examples. (Perhaps I ought to state that not all the cases referred to in this paper have been under my own care. I have availed myself of others, under the charge of professional friends, with the history of which I have been made acquainted.)

It is in dynamic convulsions before and during labor that chloral finds its best opportunity. I prefer to give it by the rectum or hypodermically. It may not be generally known that the subcutaneous areolar tissue is exceedingly tolerant of even very concentrated solutions of chloral. It is in this class too, that chloroform comes in to best advantage, but to be effective it must be given so as to completely and continuously still the patient. A convulsion will come on long before complete emergence from the chloroform narcosis if its use be interrupted, the faintest movement is an indication for more chloroform. But given in this way for several hours during labor, it is attended by a grave danger, that of *post-partum* hemorrhage, a danger in almost direct proportion to the thoroughness and direction of its employment. Its action is also less sustained and continuous than that of chloral, and, as a rule, I prefer to restrict its use to the purpose of obtaining time for the absorption of chloral.

Regarding the older methods of treatment, my experience, I hope, is exceptional. The cases that I have seen freely bled and purged and violently delivered, I have also seen die.

It is hardly possible to lay down any hard and fast lines for the management of a condition so complex and variable as that obtaining in puerperal convulsions ; yet, as an attempt at the indication of the largest probability in any given case, I submit the following summary :

(1) Convulsions do not furnish any new indications in the management of the pregnant and parturient states other than the direct treatment of the convulsions.

(2) In all really uræmic convulsions morphia is the best remedy.

(3) In all *post-partum* convulsions morphia is the best remedy.

(4) In non-uræmic convulsions before and during labor chloral is probably superior to morphia.

(5) In obstinate cases of any class the joint use of the two drugs may give better results than either alone.

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SELECTED PAPERS.

SPONDYLITIS RESULTING IN CARIES OF THE SPINE.

A Clinical Lecture delivered at the Bellevue Hospital, N. Y.

By Lewis A. Sayre, M. D.,
Professor of Orthopedic Surgery and Clinical Surgery in the Bellevue Hospital Medical College.

Gentlemen :—To-day we have some cases of spondylitis resulting in caries of the spine, called also Pott's disease, because it was first accurately described by Percival Pott, who died in 1788. But it is no more proper to call the disease which we are to consider to-day Pott's disease than to group the various affections of the kidneys, differing in causation, treatment, and prognosis, under the comprehensive title of *Bright's Disease of the Kidneys* ; for, though Pott and Bright were the first to write systematically upon the diseases which their respective names bear, yet neither of them possessed anything like the amount of definite knowledge in regard to their etiology, pathology, course, treatment, and termination, which is known at the present time. Although we would give Bright all the glory which is due to him as the first systematic upon diseases of the kidneys, yet we do not think this should entitle a number of diseases, the existence and nature of which he was entirely ignorant, to bear his name. So, too, with Pott's disease, which we would prefer to call spondylitis—and which, unless arrested, results in caries of the spine. It ought to go by the name of Pott's disease no longer. The title, spondylitis, describes to some extent the nature of the disease in question, and hence is preferable to a title which gives no idea of the structures involved or the pathological changes which takes place.

Spondylitis may occur at any period of life, as the result of falls, wrenches, strains, or other traumatisms, to the spinal column, or its attachments.

A blow or concussion may cause an extravasation remaining undetected until continued muscular exertion develops an inflammation which goes on to softening and disintegration. Suppuration may take place, and the imprisoned pus give rise to a great deal of pain ; but the most important point is, that the nutrition of the interarticular cartilages becomes interfered with, and disintegration, disorganization, or necrosis takes place on account of the very low degree of vitality of the involved parts.

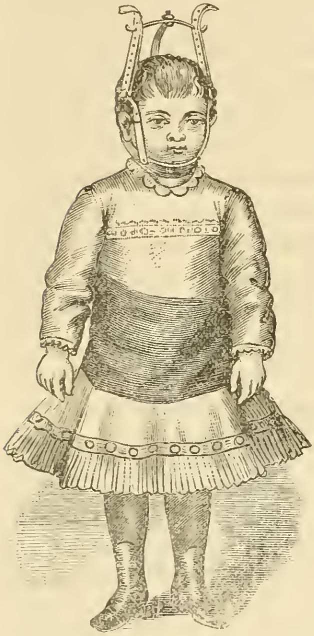
Another way in which the disease may be produced is by the individual receiving a fall or a blow of such a nature as to cause the fracture of some one of the vertebral processes. As you know, a vertebra, in its early organization, consists of seven distinct points of ossification, each of which increases in growth until further along in life, when they become consolidated into a single bony mass. Now, some little blow to the part may be sufficient to set up an inflammatory action in some one of these ossific centres, or interfere with their nutrition, and thus lead to complete disintegration of the bony structures.

Another way in which the disease may be produced, is by the bending of the spinal column out of its normal position by the strong muscles attached to the bodies and processes of the vertebræ, as in the case of a wrench, where the powerful contraction of these muscles might pull up the periosteum and thus give rise to a periosteal inflammation.

Another way is by the compression of the ribs, thus driving the heads of the ribs against the articular facets so forcibly as to set up an inflammation which may result in carious degeneration.

But no matter what may be the cause of spondylitis, the symptoms which are characteristic of the disease are generally slow in their development, and sometimes require months before they speak out with sufficient distinctness to be recognized as peculiar to the disease under consideration. One of the earliest symptoms of the disease is due to the fact that the nerves given off from the spinal cord at points in close proximity to those implicated in the degenerative changes in the vertebræ become involved to a greater or less extent, the evidences of which are manifest at their *distal* extremities. For example, if the disease be in the neck, before there is any evidence of distortion, the patient will have a choking cough, difficulty in swallowing, thoracic pains, etc., which may lead one to think there is some disease of the larynx, trachea or lungs.

A patient was presented to you a few weeks ago, if you remember, suffering from paralysis of the lower extremities, caused by spondylitis in the cervical vertebra, but who had been for several months treated as a case of croupous laryngitis, and finally the physicians in charge decided to perform tracheotomy, for the purpose of removing a foreign body, supposed to be in the larynx. But prior to the intended operation I was called in consultation, and by simply lifting the child's head so as to remove the super-imposed weight from the diseased vertebræ, respiration became normal. By the adjustment of an apparatus to retain the head in this position (see figure 1, from photograph by Mason), the child was made perfectly comfortable, as you remember, and I have since received the following favorable report from her parents, dated Hot Springs, Arkansas, November 14th, 1877 :—



"Her health is greatly improved, and she romps about the premises all day long, as merry as a cricket. No nervous irritation, *no cough* nor lassitude, but a sunny, rollicking tomboy."

And you all remember that, previous to the adjustment of the support, she was paralyzed in her lower extremities, and her peculiar cough was incessant.

Further down the spine the disease gives rise to palpitations of the heart, pain in the lower part of the chest, and a sensation of constriction.

The disease occurring still further down the column, the patient may have symptoms of gastritis, and receive at the hands of a physician, who fails to detect the true nature of the disease, a course of treatment for dyspepsia.

Occurring further down, the intestines may become involved, and all the symptoms of worm develop, the case being treated accordingly, no suspicion arising that a portion of the spinal column is diseased, until an abnormal prominence of it occurs at some point.

Lower still, the disease may give rise to pain in the bladder, rectum, and thighs, yet no suspicion arises as to the true nature of the disease until deformity occurs. A frequent desire to urinate is a common symptom of the disease in this portion of the vertebræ long before deformity is manifest.

So, when you find the symptoms we have enumerated present in any particular case, examine your patient carefully, and if you find no evidences of disease in the larynx, lungs, heart, liver, or digestive organs, then look to the back. Watch the child as he walks, and see if he moves with that freedom and elasticity so characteristic of childhood. If spondylitis be developing, the child walks in a careful manner, the muscles of the trunk are kept rigid to prevent any movement of the vertebræ upon each other, the joints of the lower extremities are in a state of partial flexion, to prevent any jar upon the vertebral column, the shoulders elevated, the chin projected, and every possible means taken to relieve the inflamed parts from pressure or movement. If the child be asked to pick up an article from the floor, he will simultaneously bend his hips, knees, and ankles, and thus by *squatting* reach the article, instead of *bending* over as a well child would do, his object being to prevent any movement of the spinal vertebræ. You then ask the child to raise himself upon his toes and come suddenly down upon his heels, watching to see whether he keeps his limbs straight or bends them to relieve concussion. The instant you see such actions as these, take off the clothes and examine the back. For this purpose, after the clothes have been removed, lay the child across your lap, face down, legs on one side of your thigh, and arms over the other thigh ; gradually separate your limbs, in order to extend the spinal column and remove pressure from the inflamed parts.

I neglected to state that in this disease the peculiar respiration is a prominent and important symptom ; it is short and grunting in character. When the child is placed over your thighs, and the spine extended, he will take a deep, full, and comfortable inspiration ; it is the sigh of relief, as I call it. Should you approximate your thighs, and thus admit of pressure upon the nerves and inflamed parts, the child will have a spasm, and resume the same short, grunting respiration. If spasm does not follow upon the removal of the extending force, it, together with pain, may be produced by placing one hand upon the child's head and the other over the sacrum, and crowding the spinal column together.

You may press upon the spinous processes and get no pain, especially is this the case if the anterior portions of the bodies of the vertebræ be the seat of the degenerative changes ; for pressure upon the spinous processes will tend to remove pressure from the diseased parts by separating the anterior portions of the bodies of the vertebræ and thus relief, instead of pain is given. You may examine the spinal column in this way and find no evidence of pain, and you say there is no disease. Do not be too sure of this, for it frequently happens that the disease does not begin on the anterior portion of the bodies of the vertebræ, but upon the sides of the vertebræ at their junction with the ribs ; therefore, in order to ascertain whether this be the case or not, take each rib separately and crowd it against the vertebræ with which it articulates. By taking the ribs separately and driving them against their articulating surfaces, if disease exist at this point, you will elicit pain together with reflex spasm, and at the same time ascertain the exact situation of the diseased parts.

Treatment.—The treatment has been to place these patients in bed and confine them in the horizontal posture. This is beneficial treatment, in so far as it removes pressure from the inflamed parts, thus decreasing the tendency to softening, degeneration, and absorption; but it does not prevent reflex muscular contraction, unless there is combined with it extension and counter-extension ; hence patients who recover from the disease without the use of extension recover with more or less distortion due to muscular contraction, even when they have been treated by keeping them constantly in the horizontal position.

But the confinement in the horizontal position for so many months, is injurious to the health of the patient, and hence numerous braces have been devised, the most popular of which is the one contrived by Dr. Taylor, of this city, and which you see adjusted to the little girl before you. This brace consists of an iron pelvis-belt, which is connected with two iron bars that make pressure along either side of the spinous processes, but do not press upon the processes themselves. The most important feature of the instrument is the hinge-joint movement on a level with the diseased vertebræ, thus permitting the super-imposed weight, sustained by the upper portion of the spinal column, to be transferred from the anterior portion of the bodies of the vertebræ to the posterior portion and the transverse processes.

Case 1.—This little girl when six years old received a fall, soon after which she began to have pain in the back, and was immediately sent to an institution for treatment. A brace was placed upon her, there being no distortion at the time, as her mother says, and she has worn it constantly ever since, a period of nearly four years, until now she is in the condition in which you see her. You will observe that the bands which pass around the thorax compress the chest in such a manner that the difficulty of breathing is greater than in any plaster-of-Paris jacket when properly applied.

When we apply a plaster-of-Paris jacket, we first expand the jacket to its fullest capacity by suspending the patients from the head any arm-pits: and then require them to take a full inspiration;

thus by the action of the levatores costarum and the intercostales, the ribs are separated to the fullest possible extent.

The little girl before you, as you see, is bent well backward and held in that position by the brace which she wears, the object being to allow the super-imposed weight to fall upon the transverse processes and the posterior part of the bodies of the vertebræ, instead of where it normally does. In this case it is the sixth, seventh, eighth, and ninth dorsal vertebræ which are diseased, and form the prominence. I wish you to observe the excoriation upon each side of this prominence: The pressure of the instrument upon the sides of the projecting vertebræ has interfered with the nutrition of the parts, and that is one great reason why recovery does not take place. I have used this sort of a brace for many years, and it has been my experience that, if the patients recover while wearing it, they recover with more or less distortion. In order to remove pressure from the sloughing sores, I take thick pieces of felt and place them upon either side, as you see, and thus guard against cutting off any nutrition to the diseased parts from undue pressure. I have a skin-fitting knit shirt placed over the patient before the plaster bandage is applied. This shirt is without sleeves, and is secured in position by tabs tied over the shoulder. Beneath the shirt in front, in the epigastric region, we place a stomach or dinner-pad, which is removed when the plaster gets partially dry, and thus room is left beneath the plaster jacket for the ingestion of a hearty meal of victuals.

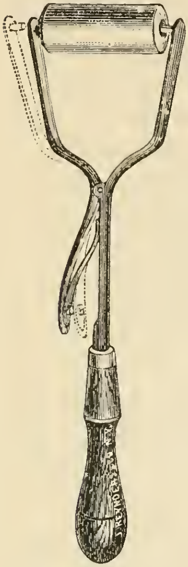
This child has never been swung up before, so we will have to instruct her as to the various steps of the process. As she raises herself by means of the pulley-rope, you see we do not permit her to bend the elbow, and pull down, but simply place one hand above the other, and continue this climbing process till she has raised the weight of her body from the floor, and simply touches the latter with the tips of her toes. This gives rise to no pain whatever, and the deformity which has resulted from the disease gradually becomes less conspicuous, as you see, due to the removal of the super-imposed weight from above, and the force of gravity acting upon the dependent portion of the body below.

We will now apply the bandages, which have been prepared of cross-barred muslin or crinoline torn in strips from two or three inches wide, according to the size of the patient, and about three yards long, the meshes of which have been rubbed full of finely ground plaster-of-Paris and rolled up in the form of an ordinary roller-bandage. These are to be dipped, just previous to being used, into a basin of warm water, sufficiently deep to complety immerse the rollers when set into it upon their ends. If the bandage be put in on its side, the air cannot escape, and the inner portion of the roller will not be sufficiently saturated with water to make it easy of application. When the air has ceased to escape from a roller it is then perfectly saturated and fit for use, and should be applied at once. As you take one roller from the basin, squeeze it gently to expel the surplus water, and immerse another end-wise, which will be sufficiently saturated for application by the time you have applied the first. Never place two rollers in the water at the same time.

The thickness of the jacket to be applied depends upon the size of the patient, three to five layers being sufficient for an ordinary sized child, but for an adult of large size probably more thicknesses would be required.

Now you see the chest is fully expanded, and, as my assistant applies the plaster bandage, I press the layers together and see that it fits the body snugly at all points, pressing it into the intercostal spaces and all other sinuosities, being careful not to make undue pressure over any elevations or projecting points. You perceive that our little patient holds herself in position by means of the pulley-rope with perfect ease, and she has just told me that she is entirely free from pain. Having covered the trunk with two layers of the plaster bandage, we now place narrow strips of tin, roughened on either side like a nutmeg grater, vertically around the trunk three or four inches apart, and carry another wet plaster bandage over these, which materially increases the strength of the casing without adding to its weight.

Having completed the application of the bandage, we now hasten the setting of the plaster by running up and down it with this heated iron roller. This idea was suggested to me by an Irish lady when I was in Ireland, where the atmosphere was so moist as to materially interfere with the setting of the plaster ; but the ordinary triangular iron found in houses proved to be so inconvenient that I had Mr. Reynders make this form of an instrument, which looks very much like a miniature garden roller. When the iron roller gets cool, it can easily be changed for a hot one.*



We will now lay her upon the table until she gets dry; but before the drying process is completed, it is important to remove the dinner-pad, and, having withdrawn it, to press the bandage in the inguinal region, thus widening it out over the anterior and superior processes of the ilium. Should the spinous processes project too prominently, it is a wise plan to place a pad over them before beginning the application of the bandage. The pads should project below the casing, so that they can be easily removed when the plaster has set. We will cut out a piece of this little girl's jacket directly over the excoriation on her back, and through the opening thus made apply some unguents; probably the next time she has a jacket adjusted to her, this will be unnecessary.

Should there be any pain experienced after the application of the jacket, no matter how slight, it is due to the fact that the bandage has been improperly applied; therefore it should be *removed at once* and a new one applied, for there is something wrong. If this be neglected there is great danger of excoriation as a consequence of undue pressure upon certain parts.

Sometimes very young children will cry when suspended for the purpose of applying the plaster jacket, but the cry of pain can be easily differentiated from that of fear or obstinacy. When their crying is not due to pain, you can proceed with your work with no fear of making undue compression of the thorax, and thus interfere with the pulmonary circulation.

Case 2.—This patient has suffered from spondylitis for six or seven years, and, as you see, has an enormous curve. I cannot say whether we will be able to help this patient or not, until we have suspended him in order to see whether the curve of his back is lessened; if so, we may be able to do him some good.

By applying a strip of sheet-lead closely over the curved portion of the spine, before he is suspended, removing this, placing it edgewise upon paper, and tracing its outline with a lead-pencil, we get an exact representation of the spinal curvature. Now, suspend your patient, straighten your strip of lead, and apply as before: remove, trace its outline alongside the first, and you have a mathematically accurate representation of the decrease, if there be any, in the spinal curvature. These patients who recover from this disease could, with timely and proper treatment, just as well recover without distortion as with it. Should a patient come to you with partial or complete consolidation, you will under no circumstances be justified in attempts to completely rectify the deformity. The vertebræ in this case are very nearly anchylosed, for you see the child is able to stand without support while I am putting on his shirt; frequently the pain is so great that the patient is unable to stand, and we are obliged to put his shirt on while he is in the horizontal position.

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*I have since discovered that the plaster hardens more readily by blowing on it with a pair of bellows.

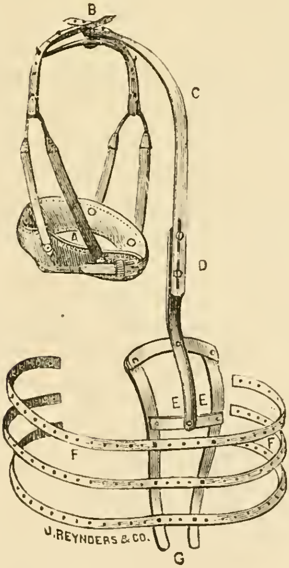
We have now ascertained the degree of curvature, both before and after suspension, and you observe what a marked diminution in the curve has taken place. Now, if we succeed in retaining this patient's spine in a position with no more curvature than it has while he is suspended, recovery will take place with very much less deformity than he now has, and it will take place much more rapidly. We will apply the plaster bandage in the same manner as in the previous case.

After an individual, suffering from spondylitis, has been placed in a properly applied plaster-of-Paris jacket, almost the first change in the appearance of the patient, which you will notice, will be the flush of color to the cheeks and an expression of absolute comfort.

In cases of spondylitis, abscesses are sometimes connected with the diseased vertebræ; and, if so, they may open down upon the thigh, in the rectum, and there is no telling where they may open, even when the disease is high up in the dorsal region or in the cervical region. Should an abscess open in any place where it will be covered by the plaster bandage when it is applied, you should make an opening through the casing so that any desired applications can be made. For this purpose place a piece of oiled silk over the abscess after a free incision has been made, then draw on the shirt.

and, having placed a piece of folded card-board with a pin projecting through it, over the wound, so as to indicate the position of the abscess, apply the plaster bandage, passing it over the pin, which, projecting, will serve as a land-mark for cutting a fenestra. Now make a circular incision which shall extend through all the layers of the jacket, remove this piece, and when you come down upon the shirt and silk, *star* them and turn the flaps over the cut edges of the opening through the casing, which will leave a clean fenestra leading to the abscess. Put in some Peruvian balsam and oakum or carbolized oil, place a bandage over it and dress it every day. This arrangement is all that could be wished, and does not perceptibly weaken the support, which is so essential in the treatment of these cases. When there are any active inflammatory changes going on within the vertebræ, you will find it much better to retain the casing entire without dividing it. Sometimes, however, after the inflammatory processes have been arrested, and the patient is convalescent, the jacket may be divided in front and islet-hooks placed upon each side, a corset string then being used to retain it in position. Thus modified, a plaster jacket may be removed or applied at pleasure, and it makes a much better corset for support than the ordinary kind.

Case 3,—The case which I now present to you is one in whom the disease is in the cervical vertebræ. The same principle of treatment is applicable here as in other portions of the spinal column; but the plaster jacket in this instance acts as a support to a jury-mast or head-rest, from which the head is to be suspended. This child, you observe, has his chin resting upon his sternum, his hands upon his knees, and has that grunting respiration so peculiar to this disease. By simply placing one hand under the chin and the other under the occiput, and gently lifting the head, you observe that the jerking respiration ceases at once. We therefore allow the child to suspend himself by the head-rest, having previously put on this skin-fitting shirt and adjusted the dinner-pad, we apply the plaster bandage as in the first instance, Having now covered his entire trunk with two layers of the bandages, we now adjust the jury-mast or head-rest. This, as you see, consists of two parallel, malleable iron bars which go upon either side of the spine, being connected at the top and giving support to a piece which is curved over the head and terminates in a swivel or cross-bar, from which is suspended the leather head-rest supporting the chin and occiput. The two malleable irons upon either side of the spine are capable of being bent to accommodate any curve. Thin strips of tin, one-half to one-fourth of an inch in width, and perforated with holes, are attached to the bars, which pass two-thirds of the way around the body. Another layer of plaster bandage is applied over the tin strips and lower portion of the jury-mast, which serves to secure them in position. The upright bar behind has two slots in it, so that it can be moved up and down and secured in any desired position. The result is that the child carries the weight of his head, through the medium of the jury-mast and plaster-jacket, upon his hips.



Having completed the application of the bandage, we will now lay the child upon the bed and wait for the plaster to set, after which we will suspend his head from the cross-bars by means of the leather head-rest, taking care to have it sufficiently elevated to give freedom from pain. Having done this, the child will be able to walk about with his head in the ordinary position, free from pain and with an expression of comfort, as seen in Fig. 1.

[The lecture being completed, the first case was measured against the wall, and found to be three-fourths of an inch taller than before the plaster bandage was applied: cheeks more red in color, and the child perfectly comfortable.

The second case was not so much increased in length, but much improved in position. He stated he was much more comfortable than with any brace he had ever worn.

The third in whom this disease was in the cervical region, after the head swing was applied and properly adjusted, ran about the room with perfect freedom, head erect, sustained and supported by the jacket and jury-mast alone, requiring no support from his hands whatever.—*Medical News and Library.*

DR. WAGNER'S LETTER.

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We add the particulars of the case referred to on page 292 :

The child of Mr. Rugg, of Hot Springs, Arkansas, was sent to me by Dr. Hammond for examination and opinion, on September 28th, 1878.

The author stated that several months ago, whilst taking its evening meal, the child was suddenly seized with a violent paroxysm of cough and difficult breathing, which continued during the night, the impression was then that a particle of food had gone the "wrong way."

When brought to me, the most prominent symptoms, were a peculiar laryngeal breathing, at times stridulous, and cough of a dry, short, hacking character. With great difficulty I succeeded in obtaining a hasty view of the larynx with the mirror ; there was neither paralysis of the chord nor growth to produce the peculiar breathing, the hyperæmia of the mucous membrane I regarded as a result and not the cause of the cough.

I did not examine the spine as the father informed me that Dr. Hammond had pronounced it "all right." Dr. H. afterwards informed me that such was not the case, but that the history of a foreign body in the windpipe had been so clearly given by the parents that that he had at once referred the case to me, as more properly coming within my province. Upon the receipt of my letter containing my opinion he examined carefully the spine, discovered Pott's disease, and then referred the case to Dr. Sayre.

After my examination of the child's larynx I became satisfied that the cough and difficult breathing were produced by reflex action, and in my letter to Dr. Hammond, I stated that if the cause was not spinal irritation, tracheotomy as a dernier resort in my opinion would be justifiable, the parents giving a clear and connected history of a small foreign body having possibly entered the trachea.

[Signed] CHARLES WAGNER, M. D.

Physician to Metropolitan Throat Hospital.

53 West Thirty-Fifth Street.

THE ANTIQUITY OF THE METHOD.

1905 CHESTNUT ST., PHILADELPHIA, April 21, 1878.

DR. SAYRE :—My Dear Doctor :—When your son was here two or three weeks ago I told him that Dr. Ashhurst had found a reference to suspension of the body in spinal disease, and I promised to send it to you as soon as I should be able to find it.

The book is entitled "A Treatise on Rickets, being a disease common to children, wherein (among many other things) is shown (1) the Essence; (2) the Cause; (3) the Signs; (4) the Remedies of the Disease." By Francis Glisson, George Bate, and Ahasuerus Regemarter, Fellows of the College of Physicians, London. Printed by John Streater in 1868. I enclose a copy of the extract, as I don't think you will be able to find the book in New York. * * *

Believe me, very sincerely yours,
C. F. HUNTER,

Extract from Glisson on Rickets, p. 363.

The artificial suspension of the body is performed by the help of an instrument cunningly made with swathing bands, first crossing the breast and coming under the arm-pits, then about the head and under the chin, and then receiving the hands by two handles, so that it is a pleasure to see the child hanging pendulous in the air, and moved to and fro by the spectators. This kind of exercise is thought to be many ways conducible in this aspect, for it helpeth to restore the crooked bones, to erect the bended joints, and to lengthen the short stature of the body. Moreover it exciteth the vital heat, and withall allureth a plentiful distribution of the nourishment of the external and first affected part: and in the meantime it is rather a pleasure than a trouble to the child.

Some, that the parts may the more be stretched, having leaden shoes upon the feet, and fasten weights to the body, that the parts may the more readily be extended to an equal length. But this exercise is only proper for those that are strong."

This work on Rickets belongs to the Pennsylvania Hospital Library.
C. F. H.

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Heart Beats in a Life-Time.—Dr. Guyst has taken the trouble to estimate the number of heart-beats in a life-time. He finds that in a life-time of fifty years there are 1,928,160,000; during a life-time of sixty years, 2,269,800,000: and during a life-time of eighty years, 3,007,040,000.

CORRESPONDENCE.

OUR NEW YORK LETTER.

15, West Twenty-Sixth Street,
New York, April 26th, 1878.

Dr. Gouley on the Supra-Condyloid Amputation of the Thigh—Dr. Thomas on Intravenous Injection of Milk—Dr. Sayre on the Treatment of Pott's Disease—Appointment of Dr. Bozeman to the Woman's Hospital—Dr. Otis' New Work on Stricture, &c—Dr. Alan P. Smith—Lithotomy Record—Case of Two Bladders, one Containing a Stone—Physiological action of Extract of Duboisia Myoporoides—Dr. DeRosset on the Mechanism of Accommodation.

At the stated meeting of the Academy of Medicine, April 18th, Dr. Gouley read a carefully wrought paper on the supra-condyloid amputation of the thigh.

The names associated with this operation are Gritti and Risori, of Italy, Stokes, of Dublin, Bardleben, of Germany, and Gouley and Weir, of this city.

The conception to Gritti who performed it over twenty-five years ago, followed for the first time in America, by Gouley, in 1862, with an unsuccessful result, however. The idea was derived from a study of the well-known osteo-plastic operation of Pirogoff at the ankle joint in which the calcaneum is resected and turned up to unite with the end of the tibia. It is intended to replace amputation at the lower third of the thigh, but is not held to be so favorable as that at the knee-joint when the patella is retained; but in these cases in which malignant disease or injury extends to the condyles, or in which the soft parts are so involved as to furnish insufficient flaps for an amputation at the knee, this new operation is to be preferred to one higher up.

The steps of the operation are simple:—an anterior semi-lunar or rochelar flap is made with the incision extending laterally on each side as high as an imaginary line drawn across the upper border of the patella, and extending as low down as the tibial spine. The ligamentum patellæ is cut through and along with the patella is dissected up with this flap. A somewhat shorter posterior flap is made, a thin section of the articular facet of the patella, removed with a fine saw, and *afterwards* the femur sawed across about *three-fourths of an inch* above the lower end of the bone. The object in sawing the patella first is to secure a steady point d'appui from the limb before its removal. After the proper steps with reference to cleansing, hemorrhage, &c., the patella is brought backwards; its sawed surface applied to the sawed surface of the femur, and a single wire suture passed through the posterior border of both bones; to secure coäptation and to prevent displacement by traction of the quadriceps femoris. Suturing of the flaps and application of adhesive strips complete the procedure; which, it is needless to say, should be conducted throughout with a view to perfect asepsis.

The stump which results from this operation is an excellent one; it bears without pain or irritation the weight of the body, and renders unnecessary that any artificial limb should have its points of support at the pelvis. Moreover the preservation of the attachment of the quadriceps femoris greatly facilitates locomotion.

Careful investigations have demonstrated that at *three-fourths of an inch* above the articular surface of the condyles is the most suitable point for sawing across the bone. Above that there is great probability of opening the medullary canal and the danger of osteomyelitis and other unfavorable results which this often entails: and below that point the area of the sawed surface of the femur is too large to be covered by the patella, and a complete coäptation of the two surfaces is essential to speedy union, as well as to the avoidance of necrosis and purulent resorption. I think I have stated all that is necessary to encourage surgeons to the performance of this supracondyloid operation, and related as far as is required the various steps of the procedure; but for other points of interest which Dr. Gouley's paper possesses, your readers must await its publication, which, I presume, will not be long delayed.

At the same meeting of the Academy, Dr. T. G. Thomas read an essay on the "Intravenous Injection of Milk," as a substitute for the transfusion of blood.

His observations extend to seven cases, all gynæcological subjects, with five successful results.

His á priori grounds for resorting to milk were based on the physical and chemical resemblance of that fluid to the chyle which is physiologically poured into the left subclavian vein, and his conclusions that milk is equal in efficacy to blood and free from many dangers inherent in blood transfusions appear to be warranted by his clinical results. The cases were related with great fullness of detail, but the history of this use of milk, prior to the inception of these experiments was almost ignored, perhaps necessarily so, from the failure of physicians to put on record the isolated cases in which it had been resorted to. If it comes to be a vital resource in therapeutics it must doubtless stand to Dr. T.'s credit.

Many precautions are to be observed in the procedure. The milk must be perfectly fresh, not over a few minutes from the cow, since from the very moment of its issue from the udder, chemical and physical changes begin in it which may communicate a septic influence to the blood mass. The cow should be milked at the door of the patient's residence, by clean hands, into a clean pail covered with fine gauze ; and the milk should be slightly alkaline, and maintained at a temperature of 99 or 100° Fah. during its flow into the vein.

The best infusion apparatus is a glass funnel connecting with a small silver canula by means of a short India rubber tube. Proper care is taken to exclude air, and to support the funnel steadily, and from five to eight ounces of milk are allowed to flow slowly into the median basilic or cephalic vein. The immediate effect is often quite unpleasant and even alarming, as the pulse may become very rapid, the respiration of a sighing character, which together with chills or tremors, denote a profound impression upon the nervous system. But these soon subside, and in every instance they were followed by marked signs of amelioriation.

The process may be repeated upon the return of the original indications, which may occur as often as every twenty-four hours ; but in Dr. Thomas' experience no case required the repetition more than five times.

It is to be hoped that the results of these experiments will inspire others, conducted in a similar intelligent manner, and if a confirmation is obtained of the favorable effects of milk thus administered, in anæmia, spanæmia, and the adynamic and athreptic diseases and conditions, generally the way will be opened to its application through a much wider range than Dr. T. has yet ventured upon.

The transfusion of blood in spite of its rational promise and its apparent simplicity, and notwithstanding the close study and mechanical ingenuity which, for two centuries has been brought to its aid still remains an opprobrium, a formidable resource which the bravest therapeutic hand grasps only when other means are exhausted. It should be stated that all of Dr. T's. cases were benefitted by the treatment, and but for serious visceral complications in two there would probably have been no death to record.

Dr. L. A. Sayre gave one of his brilliant demonstrations in the mechanical treatment of Pott's disease, at the meeting of the New York County Society, April 22d. Patients, old and young, were introduced to exhibit the complete cures effected by his method; and scores of braces and other instruments of devilish ingenuity in which the poor wretches had long writhed in torture, covered the tables and presented a marked contrast to the simple plaster and bandage corselet in which they finally found comfort and cure.

It was interesting to note the breathless surprise of the large number of physicians present, when the suffering humpbacks were taken down from the suspension tripod, straightened in form, increased in stature, and free from pain. It was almost incredible that such immediate effects were obtained! The process is an extremely simple one, and so careful has its author been to describe it in every detail, in his own books and in magazine articles, that no excuse is left to any practitioner in this broad land for ignorance of it. But it must be done properly to be effective, and its very simplicity lays the way open for error. I need not describe the various steps, for those of your readers who desire to inform themselves, and to save their patients the trouble and expense of long travel in search of an expert, should buy Dr. Sayre's book, which, having caught some of his vigor of logic and expression, cannot fail to teach them a "thing or two."

Nothing since the discovery of chloroform is to be compared in the blessings it brings to humanity with this device.

Between 1600 to 1700 cases within the past five years have passed under Dr. Sayre's hands from "death to life," as it were, to bear witness against those who decry the method and its author. The question of its priority is not the prominent one in the minds of those for whom the process has been perfected. Few practitioners indeed doubt that the conception was an original one with Dr. Sayre; certainly his genius devised the method, his skill perfected it, his persistence has vitalized it, and his vigor has forced it over the bars and gateways of prejudice. Let those who dispute the claim of priority, hang their heads in shame that if they really did know of and do this thing before Lewis A. Sayre they had neither the sense to estimate its value nor the power to give it life. If it were their child it was still-born, and such things are better buried. I think, however, Dr. Sayre himself gave them all the coup de grace in reading before the County Society an extract from an old book, to show that suspension in the treatment of Pott's disease was in use *more than two hundred years ago.* The JOURNAL is pleased to present this interesting point to its readers, on another page of this issue.

The discussion of the abuses of medical charities continues, being now before the County Society in the shape of a series of resolutions which have been referred to the comitia minora for examination and report. There is very little hope, however, that the evil will be remedied, until the Legislature shall enact that the failure to pay a doctor is equivalent to stealing from him, and ought to have the same penalty.

Dr. Nathan A. Bozeman, of button suture fame has been latterly appointed consulting surgeon to the Woman's Hospital, in the place of the late Dr. Peaslee. The appointment is eminently a fit one, but we cannot help deploring the irregular manner in which it was effected.

According to the By-Laws governing that Institution, the appointment must be made by the Board of Managers, from the nominations sent to them by the Board of Surgeons. There was unanimity in the Board of Surgeons, in presenting the name of Dr. Carroll Lee, who has so long, faithfully and with great skill rendered service as a resident Surgeon, and it was thought that he was fully entitled to the succession.

The Board of Managers, with equal unanimity ignored the nominee and appointed Dr. Bozeman. I do not hear that there was a special commission created to give the By-Laws sufficient plasticity to legalize the action of the Lady Managers, but *foemina non habet legem,* and their count is good against all mankind.

Dr. Bozeman will doubtless confer benefits upon the Hospital quite commensurate with the honors offered him, and your pages, I trust, may occasionally shine with his light.

There is about to issue from the press of G. P. Putnam's Sons, a new and valuable work on "Stricture, its consequences and the methods of its cure," by one of our eminent authorities on that subject, Professor Fessenden N. Otis, of this city. I believe that the experience of Dr. Otis in this direction is as large as that of any practitioner in the world, and what he says should come to us with the force of authority.

Perhaps that your readers are aware that for sixteen years or more he has taught that very slight contractures in the urethra, undiscoverable by ordinary methods are often the cause of serious troubles, reflex and direct; and that chronic urethral discharges are not infrequently due to slight strictures. He likewise holds (and it may be regarded as holding an important place in his views on stricture) that the calibre of every urethra bears a close definite relation to the size of its penis, and that the canal is normally smooth and nearly uniform throughout. If even a small contraction takes place at any point, although it may offer no obvious obstacle to the flow of urine, yet it may give rise to conditions, local or general, which entail both discomfort and danger.

Thus, if a urethral calibre of 30 mm. (circumferentially) be normal, a diminution at any point to 29.5 mm. (that is reduction of only 0.5 mm.) is sufficient to set up a train of pathological symptoms, which will not disappear until the normal calibre is restored.

My own observation, kindly favored by Dr. Otis, cofinrms these views, but like all innovations, however meritorious, they have been opposed by many—some though, of different conviction, some holding preconceived ideas, some bound in the swathing bands of prejudice, and some objecting to have their peaceful repose disturbed by either new facts or theories upon matters which they learned long before we were born. Many of the best minds, from those of the range of Berekely Hill down, have acceded to Dr. Otis' views and doubtless after the issue of his book the accession will become quite general.

From Baltimore, I learn that Dr. Alan P. Smith, at the late meeting of the Medical and Chirurgical Faculty of Maryland, read a statistical paper on his operations for stone.

In fifty-two cases not a single death has followed; a record without parallel in the annals of surgery, as the most favorable experience hitherto has not been able to reduce the fatal percentage below twelve.

A most remarkable anomaly presented itself in one of these patients. A man came to Dr. S. for treatment with symptoms of stone. The urine was alternately clear and muddy. Thorough use of the sound discovered no stone, the case altogether appeared very perplexing and no reason could be found for the varying physical appearance of the urine. Finally a very close examination disclosed that there were *two urethræ* in one penis and upon sounding through the second one a stone was discovered which demonstrated that there were also two bladders. A lithotomy was successfully performed, and the patient made a speedy recovery, micturating naturally through one of the urethræ during the whole period of convalescence.

I desire to call attention to the investigations of Dr. James Tweedy and Dr. Sidney Ringer, of London, into the action of the extract of Duboisia Myoporoides, since the results they obtained bear indirectly upon a paper on the Mechanism of Accommodation, which your correspondent had the pleasure of reading before the Ophthalmological Society of this city, on April 8th. The Duboisia is a shrub indigenous to Australia and has been shown to possess mydriatic properties identical with those of atropia. The experiments of Drs. Tweedy and Ringer, likewise show that it has an antagonistic action to muscarin, as it tetanizes the heart and the smooth muscles, and in some animals (batrachians) induces tetanus of the entire voluntary muscular system.

It will be remembered that many investigators hold similar views in respect to belladonna and other solanaceæ; and clinically it seems to be put beyond doubt by the phenomena of the arrest of glandular function, and of night sweats, &c., so familiar to all. But upon the ciliary muscle it has been held that atropia (as the type) exerts a *paralytic* influence. Why this exceptional effect on the ciliary muscle is claimed I cannot conceive unless it is done in the interest of the Helmholtz theory of accommodation, of which in the paper alluded to I have endeavored to demonstrate the fallacy.

That paper is altogether too technical and special for your pages, but I would simply state that the theory it advances is precisely the reverse of the Helmholtz theory, and is based upon a study of the anatomical arrangement of the ciliary muscles and the action of atropia and other solanaceæ. It will be published. DER.

MILK SICKNESS.

WEAVERVILLE, N. C., January 26th, 1878.

I am glad Dr. Woodfin is writing on Milk Sickness; there is no man in the State better qualified to do the subject justice than he, as his experience is greater than any man in the State, with that terrible disease.

As it is desirable to know all we can in regard to it, I have thought that it would be acceptable to give the opinion of another who, like Dr. Woodfin, has had to combat it for years in a different locality.

There is a creek in Middle Tennessee, near Hartsville, called Goose Creek. This creek has three branches. Between the west and middle parts there is a very rich knob, called Millstone Knob, always covered by a dense growth of cane. It is here that the poison which causes milk sickness, or whatever it is, abounds.

This disease was treated by Dr. Yandell, the father of Professor L. P. Yandell, of Louisville Medical College, as far back as 1812 or 1814, under the name of "The Puking Fever."

Dr. D. W. Mentlow, says, in regard to the disease at this particular locality, "Some contend that it has its origin in vegetable matter growing in the immediate vicinity of the Millstone Knob, others that the atmosphere surrounding this knob becomes contaminated by some means, they know not how, and that animals breathing this poisoned air during the night become affected. Some ascribe it to animalculæ floating in the atmosphere; these are inhaled by the lungs of the animal, and by this means the poison enters the system." And, lastly (and correctly as we think) "some contend that it is a mineral poison, rising from the earth during the day in the form of halitus or gas, and settles on vegetable matter during the night. In this way cattle that are permitted to *run out during the night* contract the poison by feeding on the bedewed vegetation." This seems to me to be the most plausible theory: for it is well known by all who live in the vicinity of the poison, that the most dangerous time is when the dew is on vegetable matter; consequently many keep up their milk cows, until the sun has evaporated the dew in the morning, and drive them up before it begins to settle in the evening; these escape with impunity, notwithstanding they graze on the Millstone Knob during the day. As further evidence that it cannot be a vegetable poison, Dr. M. D. L. F. Sharp and myself were requested by some of the Professors in the Pennsylvania School of Medicine, in 1826, to collect every species of vegetable on and around the Millstone Knob, dry them in the shade, and send them to Philadelphia, that they might be submitted to the most rigid analysis ; and we did so. In a few months we heard from these same Professors who reported that they had tested every vegetable, and found them entirely innoxious." They also tested a mushroom from the same knob with like result. Dr. Mentlow says, "From these indisputable facts, and from all that I know respecting the cause of milk sickness, the conviction forces itself upon my mind that the cause resides in the earth, and near its surface, and that it is exhaled by the sun during the day, and settles on vegetable matter during the night."

This poison differs from all the known poisons in the world, in the following particulars :

1st. It lies quietly in the system for a long time without exhibiting any of its toxical powers, until the person or beast is forced to take exercise.

One of my neighbors concluded to winter his mules on this knob, as the green cane was very abundant, believing that nothing would kill a mule, but to his astonishment two or three out of five died. Capt. Thompson drove his cattle to this knob some years ago for the purpose of wintering them on the cane. They remained during the winter, and seemed to do well ; but in the spring of the year when he attempted to drive them home, thirteen out of twenty died.

2d. It is more ethereal and diffusive than any known poison to me. Most of the poisons with which I am acquainted affect the stomach and bowels, the brain and nervous system ; this pays no court to either, but extends through every muscle, bone, and tendon, affecting the whole system ; yes, even the skin and cellular substance under the skin. It will be remembered that I stated that Capt. Thompson lost thirteen of his cattle, as he was driving them from the Millstone Knob. He had them skinned, and the hides were hung on poles between his cribs ; the rats being quite numerous, they gnawed the cellular substance from the hides, which was so poisonous as to kill every rat about his cribs. This circumstance alone proves the great diffusibility of the poison, finding its way even to the skin and cellular substance.

It is known by all the old settlers in the neighborhood of Hartsville that if a cow should die of this poison, and a *hog* should eat of the cow, the hog will die; and if a dog should eat of the hog, the dog will die; and if a buzzard should eat of the dog, the buzzard will die. A gentleman on Goose Creek, near this knob, put up his hogs to fatten: he had a cow that was complaining; he turned her in with the fattening hogs; she died in a short time; the dogs ate part of her flesh, which killed every one, some thirty in number. A Mr. Hall and his wife were poisoned and died by eating a chicken that had been poisoned by picking some of the flesh from a cow that had died with the milk poison."

The above cases goes to show, as Dr. Woodfin says, that the poison of milk sickness is entirely *sui generis*, not like any poison known in medical books. It will be seen that there is a difference in the opinion of Dr. Woodfin and Dr. Mentlow in regard to the effect of this poison on hogs; and also in regard to cattle dying which do not eat of this poison except while the dew is on the vegetation. I must incline to the opinion of Dr. Mentlow, as the experiments were continued until they found by putting dry hay on this knob of a night and feeding it to a cow in the morning while it was wet with dew, that the cow died; but if they let the hay dry before it was fed it had no bad effect on the cow to which it was fed. As to the symptoms there is but little difference between the two. I will not give Dr. Mentlow's treatment until I see Dr. Woodfin's, and if there is any material difference in their treatment I will give the profession that difference, as we desire to have the subject thoroughly ventilated. J. A. REAGAN, M. D.

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Cæsarian Section in North Carolina.—The only cæsarian section reported by Dr. Harris in his article on Gastro-Hysterotomy in the *American Journal of Medical Sciences* for April, was one by Drs. Mallett and McSwain, of Fayetteville, in 1862, (mother lived and child died) and another by Drs. J. R. Hicks and Wm. F. Henderson, (mother lived and child died).

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

M. J. DeRosset, M. D., 15 West 26th St., N. Y. } Editors.
Thomas F. Wood, M. D., Wilmington, N. C. }

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to* DeRosset & Wood, *P. O. Box* 535, *Wilmington, N. C.*

THE MANAGEMENT OF THE MEDICAL SOCIETY AGAIN.

In an editorial in our last issue we called attention to what we conceived to be faults in the management of the State Medical Society. Several letters have reached us, complaining bitterly of the injustice we have done some of the most eminent members of this venerable body.

If, at the time we penned these lines, there had been in our mind any personal application of our criticism, the article would not have appeared. We disavow entirely any intention to charge any officer or member with criminal acts, as our words have been perverted to mean.

We attempted the thankless task of directing the attention of the profession to what had been done wrong, in our opinion, with a view of showing how it might be corrected. We thought a disproportionately large amount of attention was paid to the "politics" of the society and too little to the earnest work of medical scientific progress. Friends of the society, present at the meeting, complained that our growth and elevation were being retarded by such disproportionate attention to the needs of our organization. We believed that their opinion was worthy of great weight, and it coincided with our observation. But because our opinion was such, and we were bold enough to so express it, we do not see that we necessarily array ourselves personally against any officer or member.

Personally we have no grievances to correct; as editors though we are determined to give our influence to the promotion of the symmetrical and healthy growth of our Medical Society. If what we have said formerly made a different impression, a longer acquaintance with our course will be a sufficient answer. If our personal friendship with the gentlemen is not an assurance of our guiltlessness of offering personal affront, and if this statement does not show our intention to aim at the good of the medical profession and the Medical Society of North Carolina above all else, then they must have an incorrect conception of the spirit in which we have entered upon our work. We want friends, and would not offend any by our opinions; but if we are not to speak of family failings, who then? We have tried to speak kindly but earnestly, and if we have offended any it has been through that active zeal which we have for our State Medical Society, and the Medical Profession, preferring their interests above all personal considerations.

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CONTRIBUTION TO THE HISTORY OF MEDICAL EDUCATION AND MEDICAL INSTITUTIONS IN THE UNITED STATES OF AMERICA, 1776-1876. BY M. D. DAVIS, A. M., M. D.

This special report has brought together much historical matter, which otherwise would have been unknown, and is remarkably full as to the history of medical schools.

We would like to ask Dr. Davis to make the following addition to his historical items of medical interest, if he should ever revise this report.

There was a Medical Society in existence in North Carolina in 1801. Its organization was not very unlike many of the older societies then in existence. Its Board of Censors had the power of conferring a license to practice. In the first meeting, the record says, "Mr. Charles Smith presented himself for membership, and having been examined by the Censors in the presence of the Society, was admitted to membership."

In those days the feeling of national reliance was high among the doctors in this State, and in order to drive foreign drugs out of the market, premiums were offered for those raised in the country. Among the premiums offered was twenty-five dollars for the largest quantity of opium, in quantity not less than five pounds. Premiums were offered for rhubarb, castor oil expressed without heat, and senna.

The first paper read was by Dr. J. Webb, of Hillsborough, "On the Causes, Symptoms and Treatment of Gout and Rheumatism." The subject for discussion announced for 1803, was "Cholera Infantum."

How long this Society existed we do not know. But in 1849 a new Society was formed, adopting the Code of Ethics of the American Medical Association. With the exception of the four years of war, these meetings were uninterrupted, harmonious and profitable. This is not the time and place to give an outline of the present Society; we only desired to fill up the gap which Dr. Davis has left. This task of putting the record of our State before the world correctly, it seems is not confined to the daily secular press. It must be that North Carolina is as little known as a foreign State, at least she is as much ignored by the average historian.

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The Nails.—Mr. Jonathan Hutchinson in a recent lecture on diseases of the nails says: The transverse markings on the nails seen after severe illness, indicates interference in their nutrition. A record of relapse or exacerbation permanent during the life of the nail, is left on its surface in the form of a transverse furrow. As the age of an oyster may be reckoned by counting the ridges on its convex shell, so in these cases may the number of relapses and the relative duration of the intervals be estimated.

REVIEWS AND BOOK NOTICES.

Hand-Book of the Practice of Medicine. By M. Charteris, M. D., Professor of the Practice of Medicine, Anderson's College, Glasgow ; and Physician and Lecturer in Clinical Medicine, Glasgow Royal Infirmary. With illustrations. Lindsay & Blakiston, 25 South 6th Street. Philadelphia, Pa. Pp. 336.

The volume before us is one of the Student's Guide Series, and presents a very attractive mechanical appearance. But turning from the great works of Copeland and Trousseau, and Ziemssen, we may well wonder if our little volume can have traversed the whole range of medicine. To our very great surprise we find a volume of much merit. and one that should be welcomed by the student and even the practitioner as a capital remembrancer. As far as we have had time to examine it, it treats upon the main important matters daily encountered by the physician.

Under the head of Cardiac Murmurs, the diagnostic signs are succinctly and clearly outlined, enabling the student by a short process to master difficulties of great importance. Such diagnostic helps we notice under several other important heads, placing the student or physician directly in the way of making out his case. The art of condensing in a clear manner the science and art of medicine, belongs to our author in a marked degree. Of course there are omissions, and some of the articles are treated as secondary, which, to the American student are of prime importance, notably the articles on the malarial fevers ; but upon the whole the descriptions are satisfactory. By the artist's help several good etchings and schematic drawings illustrate the text. One etching on "Typhoid Ulceration of the Ilium," another of "Tenia Echinococcus from hydatid cyst of the Liver," another of "Urinary Deposits," another of "Renal Casts, Mucus Globules, Vibrios, Bacteria and Spermatozöa," &c.

The appendix of formulæ is very convenient and useful, embracing for the most part articles from the Br. Pharmacopœia. The medical student who masters this little volume will be well on the way for the enjoyment of the more elaborate treatises, and as the average student is not slow to recognize a friendly helping hand, we predict the exhaustion of a large edition of this book.

Practical Gynæcology. A Hand-book of the Diseases of Women. By **Heywood Smith**, M. A., M. D., Oxon, &c., &c. With illustrations, pp. 205. $2 00. Lindsay & Blakiston.

This book is another of the Student's Guide Series, but does not fulfil its purpose as completely as the work above. Its arrangement though, will greatly aid the student by bringing forcibly to his mind and in a natural order, all the important knowledge under each head treated, so that it can be easily memorized. The practitioner, however, who finds himself with a difficult case on hand will hardly find much comfort or aid, especially if he has already learned to rely upon Thomas' great work upon the same subject. Whatever may be the opinion of reviewers, such books are very popular and will be bought up by students and physicians with nearly as much eagerness as were Neill and Smith's Compend and Ludlow's Manual, by Confederate candidates who were expecting to go before the Army Medical Boards. If they bring as great prices the future of the publishers will be quickly made.

MEDICAL ANNOTATIONS.

ANALYSIS OF FIVE HUNDRED CASES OF OPERATION FOR STONE IN THE BLADDER.

By Sir Henry Thompson, F. R. C. S.

Reported to Royal Medical and Chirurgical Society, Mar. 12, 1878.

[*London Medical Examiner.*]

The 500 cases were in adult males, that is, of twenty years old and upwards, the great majority being from fifty to seventy years. The mean age was sixty-one and a half. They comprised Sir H. Thompson's entire and unselected work from the first case up to January, 1877. The published experience of Cheselden, Martineau, Brodie and Fergusson was recorded. The sum of similar cases treated by them was 422. Of the 422, sixty-nine were fatal, or 16½ per cent., i. e., one in rather more than six cases. Of the 500 in question, 422 were by lithotrity, and 78 by lithotomy. The number of individuals operated upon was 420, several of the lithotrity patients being operated upon twice, a few three times. In all cases a considerable interval and evidence of fresh formation, mostly a newly-descended uric acid calculus, had existed. Small phosphatic concretions, although removed by lithotrity, were not reckoned as stone in the bladder. The chemical constitution of the calculi was as follows:—Uric acid, 313; phosphatic, 99; mixed, 81; cystic oxide, 1; pure phosphate and carbonate of lime, 2; phosphatic calculi formed on foreign bodies, 4. The mortality, accepting almost any death occurring within six weeks of the operation, was as follows:—In 422 cases of lithotrity, 32 deaths or 1 in 13 cases; in 78 cases of lithotomy, 29 deaths, or 1 in 2¾ cases; in the total 500, 61 deaths, or 2 deaths in 8½ cases. The causes of death which were given in each case, were tabulated, compared and contrasted in two operations, with references thereupon. The accidents met with in operating by each mode were detailed, and the manner in which they were dealt with. The general inference was arrived at, that it is unwise to apply, as a rule, lithotrity to any stone above moderate size; and if any calculus be sufficiently large to require what is known as the fenestrated instrument, it is better to employ lithotomy. The author had not employed such an instrument in the last ten years.

Sir James Paget said the present might be considered a fair time for re-considering the question of the comparative advantages of lithotomy and lithotrity. His own experience had been less than that of Sir H. Thompson, but he must confess to a growing preference for lithotomy. Sir Henry Thompson's experience showed that the best obtainable results of lithotrity had been arrived at, at least for some time to come. Much improvement might be expected in the after treatment of lithotomy.

Sir H. Thompson concluded by saying that lithotrity was the best operation when the stone could be removed at two sittings. Accidents attending lithotrity were generally due to undertaking to crush too large a stone. Early detection of stone was to some extent due to the reluctance of many patients to believe they had stone.

LITHOTRITY BY A SINGLE OPERATION.

Professor Henry J. Bigelow, M. D., of Harvard, contributes two articles to the Boston *Medical and Surgical Journal*, (Feb. 28 and March 7) on lithotrity. A resumé of such an important article can hardly give a just estimate of its merits and we advise our readers interested in this branch of surgery to read the originals. "Gentleness, dexterity, and experience are especially to be valued in lithotrity," says Dr. Bigelow, a prefatory injunction of great importance. "The average bladder and urethra have no extreme susceptibility, as is attested by the generally favorable results of lithotrity, and even of catheterism, which are practiced with varying skill everywhere. * * * * * If we remember that in the case of the presence of a mulberry calculus, it clasps the stone at every act of micturition, often with a persistent gripe, the comparative immunity of its tender mucous membrane is quite remarkable. * * Polished metalic surfaces carefully manipulated can hardly do so much damage, as the agencies enumerated."

Sir H. Thompson assigned two minutes as the duration of a sitting, but since he has used anesthetics he recognizes the advantages of a longer sitting. Dr. Bigelow's conviction is, that it is better to protract the operation indefinitely in point of time, if thus the whole stone can be removed without serious injury to the bladder. If the bladder is emptied of detritus, we have as little to apprehend from fatigue of the organ, as from the alternative of residual fragments and further operations.

Dr. Bigelow has devised an instrument figured in the *Journal*, which in his hands has succeeded very well in removing detritus. "The successful evacuation of the bladder depends upon several conditions, both in the apparatus and its use, which, for distinctness may be enumerated separately. A large calibre of the evacuating tube, with a calibre at least seven-sixteenths of an inch=31 Charrière. The tube should be straight or curved near the extremity, the latter to be used with the curve downward. The receiving extremity should depress the bladder when required to do so, and thus invite the fragments, while its orifice remains unobstructed by the mucous membrane. The directions for the manipulation of the bulb and evacuation of the fragments are given in minute detail and illustrated with wood cuts.

Dr. Bigelow's excellent results are very enticing and no doubt that by his elucidation of the subject much advancement will be made in lithotrity, but the great number of cases to be operated upon to give one the skill to crush "soft stones weighing 1230 and 1270 grains a piece" will deter the general surgeon from preferring it to lithotomy.

SUFFERING FROM DEPRIVATION OF WATER.

Dr. J. H. King, U. S. A., reports a very interesting account of the sufferings of a detachment of Co. A., 10th Cavalry, under Capt. Nolan, while scouting on the "Leano Estacado" or "Staked Plains," Texas. (*Am. Jour. Med. Sciences*, April, 1878.) For eighty-six hours this command toiled over an arid plain, under a tropical sun, without a drop of water.

On the third day the "desire for water became uncontrollable. The most loathsome fluid would now have been accepted to moisten their swollen tongues and supply their inward craving. The salivary and mucous secretions had long been absent; their mouths and throats were so parched that they could not swallow the government hard-bread: after being masticated, it accumulated between the teeth and in the palate, from whence it had to be extracted with the fingers. The sensibility of the lingual and buccal mucous membranes was so much impaired that they could not perceive when anything was in their mouths. Brown sugar would not melt in their mouths. Vertigo and dimness of vision affected all; they had difficulty in speaking; voices weak and strange-sounding; and they were troubled with deafness, appearing stupid to each other; they were also feeble and had a tottering gait. Many were delirious, and sleepless.

They resorted at this stage to horse's blood, but the poor animals had been so long without water "that their blood was thick, and coagulated instantly on exposure. * * * The heart and other viscera were grasped and sucked as if to secure even the semblance of moisture. * * * Their own urine was very scanty and deep colored, but of it they drank freely, first sweetening it with sugar. * * * They became oppressed with dyspnœa, and a feeling of suffocation as though the sides of the trachea were adhering, to relieve which they breathed with closed lips, prolonging the inspiratory interval as much as possible.

Providential relief at length came by their reaching "Double Lakes." Their thirst was insatiable, and they kept filling their stomachs until they vomited and kept repeating the process. Warm coffee was the only thing that revived them.

"Although water was again and again imbibed, even to the repletion of the stomach, it did not assuage their insatiable thirst, thus demonstrating that the sense of thirst is, like the sense of hunger, located in the general system, and that it could not be relieved until the remote tissues were supplied. The same cause is competent to explain the overpowering dyspnœa which threatened the existence of these men: for only moist membranes allow the free passage of gases which must take place in respiration.

The superior endurance of the mule over the horse was obviously manifested on this scout. The horses tongues were swollen, mouths and systems generally affected similar to the men's. They could not chew or swallow grass; many gave out completely. On the other hand, the mules, comparatively unfatigued, would crop the grass and graze at every halt.

Capt. Nolan's loss was two men dead and two missing.

ABINGDON ACADEMY OF MEDICINE.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—Believing that you and some of your readers would like to have some information about what is being done by the medical profession in this section of Virginia, I send you a short account of the last meeting of the above named Association. You will observe that we entertain kind feelings towards the physicians of your State. The present President of the Medical Society of North Carolina, Dr. R. L. Payne, of Lexington, was elected an Honorary Fellow of the Academy of Medicine, several years ago. (By the by, we regard him as a whole souled "fellow" in every sense of the word. He attended, with Dr. Bahnson, of Salem, the meeting of the Medical Society of Virginia, which convened in this place in 1874. Both gentlemen made fine impressions on the minds of our physicians and "the people" with whom they became acquainted.

The regular annual meeting of the above Association was held at the residence of Dr. H. M. Grant. Several members from the county were present. The following gentlemen were elected for the ensuing year:

Dr. J. S. Apperson, President.
" R. J. Preston, 1st Vice President.
" Jas. W. Ogden, 2d " "
" Geo. E. Wiley, Recording Secretary.
" W. F. Barr, Corresponding "
" H. M. Grant, Treasurer.

The next meeting will be held at Dr. Wm. L. Dunn's, Glade Spring. Subject for discussion: *Typhoid Fever. Essayist:* Dr. W. F. Barr.

Dr. Alderson, of Meadow View, was elected a member.

Delegate to the Medical Society of North Carolina—Dr. E. M. Campbell. Delegates to the American Medical Association, which meets in Buffalo, N. Y., June next—Drs. W. F. Barr, Wiley and Alderson.

The following gentlemen were elected Honorary Fellows—Drs. Samuel Dunn, Glade Spring; J. S. Wellford and Hunter McGuire, Richmond, Va.; Wm. Selden, Norfolk; W. G. Thomas and M. Whitehead, of North Carolina; Horatio Storer, Boston, Mass. and Robert Battey, of Georgia.

Very respectfully,
W. F. Barr, Cor. Sec.

Abingdon, Va., April 25th, 1878.

DOMESTIC OXYTOCICS.

Following a domestic tradition, Dr. Long, of Louisville, proposes *Phoradendron flavescens*, (which he incorrectly calls *Viscum album*, this being the European *Mistletoe*) as an oxytocic. He makes a decoction, (and in this form he prefers to administer it,) by pouring a pint of boiling water on two ounces of the dried leaves, or four ounces of the green leaves. Two to four ounces may be given at a dose, as a substitute for ergot.

Ustilago zeæ (Schweinitz,) *Ustilago maydis* (Tulaisne) *corn smut*, is another candidate for professional favor as an oxytocic, and is fast growing in popular favor. This fungus is now undergoing a professional test which will determine its value. It is easy to be misled by early results of drugs possessing the wonderful properties of contracting the womb, and our contributors will do well to write specifically their observations. Crude observations are apt to result in such a reäction against the medicine as to consign it to oblivion, when really it may be possessed of genuine power.

A fluid extract of *Ustilago zeæ* is prepared by several wholesale dealers, but it is easy enough for the practitioner to collect the fungus, and make the preparation while it is fresh, as it is easy to obtain. Many of our farmers will be glad to know that such vile pests as are the mistletoe and corn smut, can be turned to some account, and would be willing, no doubt, to see both of them become as scarce as peruvian bark is now.

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COLLECTANEA.

AMERICAN MEDICAL ASSOCIATION.

The Chairmen and Secretaries of the several Sections of the American Medical Association, are requested to send in (by title) the papers to come before them, with the time required for reading. Also, all gentlemen having papers to present, not referable to the Sections, will send as above, without delay to

Thos. F. Rochester,
Chairman of Committee of Arrangements.

Buffalo, N. Y.

KNOT OF THE CORD DIAGNOSED BEFORE DELIVERY.

Professor Alexander Simpson related the following case to the (April 10th) meeting of the Obstetrical Society, of Edinburgh. He was called on March 21st to the fifth confinement of a lady. On examination he found the first stage completed, and the head passing through the os uteri, with the membranes intact. When the head had reached the floor of the pelvis, the right ear could be felt just behind the arch of the pubis. On trying to make out its outline further, he detected the pulsation of the funis with an irregularity in it. The membranes were kept intact until they protruded through the vulva. When the child was born the irregularity was found to be in a knot, and the cord itself was coiled thrice round the neck. The child, a strong boy, after a few turns from side to side, according to Marshall Hall's plan, soon cried lustily. Chantreuil (Thése des Disposition du Cordon; Paris, 1878, p. 115) gives three factors in the production of knots:—1st. Length of cord. 2d. Movements of mother. 3d. Exaggerated movement of the fœtus. In this case the first two were present, as the cord was thirty-five inches long, and the intra-uterine movements of the child has been so vigorous as to prove even distressing to the mother. Dr. Read (*Am. Jour. of Med. Sciences*, 1861, XLII, 381,) in an excellent paper argues that the knots are tied during labor, and not during the child's intra-uterine life. In this case the facts that the knot was only nine inches from the umbilicus of the child, and that it was felt completely formed during labor, go far to prove that it was tied previous to the coiling of the cord round the neck.—*Medical Examiner*, London, April 25th.

Dr. Ferrier in a late lecture on "Localization of Cerebral Diseases," says the "American Crow-bar Case," has lately been appealed to by Dr. Dupuy as showing, that lesions of the so-called motor region may occur without paralysis. * * * * * This case is quoted as one in which the man suffered no damage bodily or mentally. The true history of the case as shown by the account furnished by Dr. Harlow, shows that the man's mental condition was so changed, the animal predominating over the intellectual, passionate outbreaks seizing a man who formerly conducted the affairs of his station with coolness and prudence, that his employers were obliged to put another in his place, as foreman in the quarry. "After these facts I do not think it can be said with justice, that the man suffered no damage bodily or mentally, or that the case is in opposition to the experimental facts I have adduced as the effect of lesions of the frontal lobes."

Cæsarean Section and Removal of the Uterus.—Professor Späth, of Vienna, recently made a Cæsarian section upon a woman in her tenth pregnancy, suffering with osteomalacia. After a living child was removed without difficulty, the bleeding continued to be considerable, although ergotine was injected. He concluded then to extirpate the uterus, which he did by means of the écraseur, and during all of the operation "Listering" was adopted. The patient made a good recovery, all pains heretofore caused by osteomalacia having disappeared. There is at least one advantage in the operation—the woman cannot again become pregnant. Professor Späth exhibited his patient to the Vienna Medical Society eighteen months after her recovery.

Prickly Heat.—A correspondent of the *Canadian Journal* speaks in high terms of the efficacy of the following formula for prickly heat:

Sulphur sublimat	80	parts.
Magnesiæ oxidi	15	"
Zinci oxidi	5	"

Place the powder on a plate and press a wet sponge on it. Rub the body with the sponge, to which now adheres particles of powder, and continue the application for fifteen minutes. Wash the parts clean of the adhering particles.

Baths of water at 95° to 98° F., and even hotter, have a decidedly beneficial effect upon the disease.—*Exchange.*

Marino's Anti-Neuralgic Injection.—Ergotine, one-fourth to one-fifth of a gramme, (3¾ to 3 grains), water or glycerine, q. s. Dissolve for a hypodermic injection. It is employed in neuralgic pains and induces a more or less intense burning sensation, which disappears in the course of half an hour if the puncture be covered by cold wet compresses. Usually it induces neither abscess nor erysipelas. One, or at most, two injections relieves the pains, but, in order to prevent relapses, from two to six others may be given, according to the intensity and duration of the neuralgia. In tic-douloureux, these injections have proved very useful, while in sciatica they have often failed.—*Medical Times and Gazette, from Union Medical.*

Ice in the Rectum in Chloroform Narcosis.—In the *Gazette des Hopitaux,* March 23d, M. Baillée thinks that there is no more effectual remedy in narcosis produced by chloroform than that of introducing ice into the rectum. Dr. Vivian Poor in the London *Lancet* (Am. Ed., 1873) called attention to the same method in an article remembered now by chloroformists for this and other valuable knowledge contained in it.

Lady Doctors.—It has been wickedly remarked, that a lady who practices medicine commits two faults. She increases the number of doctors, and diminishes the number of women.—*Medical Times and Gazette.*

REPORT OF THE PROCEEDINGS

—OF THE—

MEDICAL SOCIETY OF NORTH CAROLINA.

TWENTY-FIFTH ANNUAL MEETING.

MORNING SESSION—FIRST DAY.

GOLDSBOROUGH, N. C., May 14th, 1877.

Society met at Goldsborough at 2½ o'clock, Tuesday afternoon, Dr. R. L. Payne, President, in the chair, and Dr. L, J. Picöt, of Littleton, Secretary.

The meeting was opened with prayer by the Rev. Mr. Marable, of Goldsborough.

In behalf of the community, Mr. A. K. Smedes welcomed the profession to the hospitalities of the town.

The President responded to the welcome, thanking the gentleman for the chaste and elegant manner in which he had couched his language.

Committee on Credentials was then appointed as follows:

Dr. R. J. Hicks, Chairman, and Drs. Charles Duffy, Jr., F. M. Rountree, Joseph Graham, A. A. Hill.

The following members answered to their names:

Dr. S. S. Satchwell, Rocky Point; A. Holmes, Clinton; C. T. Murphy, Clinton; J. A. Gibson, Concord; J. K. Hall, Greensborough; Geo. A. Foote, Warrenton; F. M. Rountree, Hookerton; Chas. J. O'Hagan, Greenville; Wm. Little, Raleigh; J. H. Hicks. Faison; Thomas F. Wood, Wilmington; J. F. Shaffner, Salem; Robt. I. Hicks, Williamsboro; Walter Debnam, Earpsborough; G. G. Smith, Concord; W. W. Lane, Wilmington; H. Otis Hyatt, Kinston; W. T. Ennett. Rocky Point; A. G. Carr, Durham; J. M. Hadley, La Grange; Geo. L. Kirby. Goldsborough; R. B. Haywood, Raleigh; Josha. W. Vick, Selma; Jos. Graham, Charlotte; J. T. Miller. Goldsborough; Thos. J. Moore, Charlotte; T. D. Haigh, Fayetteville; W. C. Murphy, Magnolia; D. W. Bullock, Whitaker's; W. C. McDuffie, Fayetteville; Richard H. Lewis, Raleigh; Geo. W. Graham, Raleigh; H. M. Alford, Greensborough, and others we were not able to get. Honorary member, Dr. John H. Hill, Goldsborough.

Reading of the Minutes of the last meeting was dispensed with.

Report from the New Hanover County Medical Association was adopted and received.

Dr. C. T. Murphy came accredited from Clinton as a delegate from Medical Association of Sampson County.

Committee on Finance was appointed as follows: H. Otis Hyatt, T. D. Haigh, J. F. Miller.

Dr. R. J. Anderson, of Albemarle, offered his resignation, which being referred to the following Committee:—Drs. Shaffner, Smith and Gibson, was accepted.

The Secretary read several letters from gentlemen desiring to join the Society, although unable to attend the meeting.

A resolution was adopted that all applications for membership must be referred to the Committee on Credentials.

The regular paper on Diphtheria was appointed to be read to-morrow at 9 o'clock, A. M.

Dr. Little, of Raleigh, read a paper on the Suppression of Urine of 10 days duration. The patient, a female, suffered with intense pain and nausea. There was no swelling about pubic region, and upon introducing the catheter very little urine was drawn away. She finally succumbed.

Points of interest in this case were duration of the suppression with unimpaired mind, &c. There was no microscopical examination of the tissues, although a *post mortem* examination was made. The paper was referred to the Committee on Publication.

Dr. Charles Duffie, enquired if Dr. Little had employed Jaborandi in his case. He had used it thoroughly in several cases. Profuse salivation and sweating ensued, but unfortunately in all his cases where there was absolute failure of the kidney to secrete urine, death resulted.

A discussion ensued participated in by Drs. Thomas J. Moore and Joseph Graham, of Charlotte, but we were not able to get the notes.

Dr. W. W. Lane reported a case of chronic psoriasis vulgaris, and exhibited beatiful colored photographs of the disease. This case was treated with Goa powder without phosphorous internally, and is rapidly getting well. At Dr. E. A. Anderson's suggestion, he used gutta percha collodion, but abandoned it and returned again to Goa powder with success. The spots of psoriasis were scraped and washed, and the spots wet, and the powder rubbed on, and allowed to remain. The resulting erythema was not stubborn. Dr. Lane had another acute case of psoriasis on hand, which he was treating in the same way, and expected good results.

Dr. Thos. F. Wood had seen these cases and confirmed the diagnosis of Dr. Lane. Goa powder owed its virtue to chrysophanic acid. It was found in rhubarb and yellow dock.

Dr. Charles J. O'Hagan rehearsed the history of the introduction of Goa powder, and the discovery that chrysophanic acid was the curative element. The diagnosis of psoriasis was not difficult: and it is not contagious; it is not due to syphilis. Dr. O'H. thought, perhaps, the success of the domestic treatment of skin diseases by yellow dock was owing to the presence of chrysophanic acid.

His remarks extended to the treatment of other forms of psoriasis and thought if Goa powder fulfilled its expectations, that it would take a permanent place in our Materia Medica.

Committee on Finance reported that the Society was out of debt, and there was a balance of $203.00 on hand, and suggested the per capita assessment be made $1.00 for the following year.

Dr. O'Hagan made an oral report of three cases of lithotomy, presenting some unusual features which he would name.

The first case was a youth 21 years of age found to have a calculus, which he removed by lateral operation. It was a phosphatic stone three inches in length. Of course, it was removed in direction of its long axis; the patient recovered. The weight of the stone was not stated.

Another case was that of a man 52 years of age. The peculiarity of this operation was excessive hemorrhage. Eleven days afterwards there was a serious secondary hemorrhage. Two handfuls of clotted blood were expelled. The calculus was oxalate of lime. Recovered.

Case third, of a 9 years old child. The calculus was cordate shape, and removed by the median operation. Recovered. The specimens were exhibited to the Society.

Dr. Lane read a case of double amputation of both legs below the knee in which the patient died from traumatic tetanus. Believing as he did that failures should be recorded with successes, he thought a useful lesson could be learned by a study of this case. Referred to Committee on Publication.

A paper on the Topography of the Diseases of Sampson County, was presented by Dr. W. C. Murphy, which will appear elsewhere.

STRICTURES BY OTIS' METHOD.

Dr. W. A. B. Norcom made some remarks on Otis' treatment of strictures. The great trouble which results from very small contractions of the urethra had not been properly recognized, nor its importance weighed. A patient of his, a young gentleman, had a small urethral contraction, and with it epilepsy. A division of the contracted urethra cured the patient entirely. He had never believed that such symptoms could arise from so small a cause until his attention had been fixed upon it by the writing of Dr. Otis. The urethra had never been measured exactly before Dr. Otis measured it. He had found the exact proportion between the penis and urethra, and invented a urethrameter which was absolutely accurate. Sir H. Thompson believed that 8 or 9 of the English scale was large enough to indicate a cured stricture, but had since modified his opinion. Dr. Norcom explained the way Dr. Otis used his urethrameter, exhibiting his instruments to the Society. The strictures of small calibre are treated by a bulb-end bougie. Recontraction of stricture after operation is due to the stricture not being entirely divided, and it was always the correct inference. Gleet is always accompanied with stricture ; cure the stricture and you will cure the gleet.

Dr. O'Hagan said that every one has to treat patients complaining of diseases of the kidney and bladder, with symptoms so vague and puzzling, that these cases were largely regarded as unsatisfactory. In many cases they were nothing but lessening of calibre of the urethra. The younger members of the profession must not be deceived by the remarks of patients in respect to their condition, but inspect the urethra before they ventured on a diagnosis.

Dr. Duffy believed that the urethra must be divided when the stricture was near the meatus ; divulsion will not do.

Dr. Hyatt has been in the habit of cutting the urethra in all cases of gonorrhœa, acute or chronic, because there is most always ponding of the gonorrhœal matter behind the contraction. When he failed he knew he had not cut deep enough, and tried again.

Dr. Wood used the dilator of Sir H. Thompson in preference to the urethrotome, and believed that the choice between divulsion and cutting was very much as one had attained success with one or the other instrument. He had seen both succeed.

Dr. Potter had had like good success from dilatation without cutting, and always employed it.

Dr. Graham said that Dr. Otis' plan was to overcome the slight narrowing of the urethral canal, which was so often passed by as of not sufficient importance. The cure was effected when its calibre was restored, and not without.

COMMITTEE ON OBITUARIES.

The President appointed the following gentlemen a Commitee on Obituaries: Drs. J. W. Vick, W. Debnam, H. Alford, and J. A. Gibson.

DR. SAYRE MADE AN HONORARY MEMBER.

Dr. Norcom moved that Dr. L. A. Sayre, of New York, be made an honorary member of the Society; unanimously agreed to.

DR. POTTER ON TREATMENT OF SKIN DISEASE BY ELECTRICITY.

Dr. F. W. Potter, related his experience in treating skin diseases with electricity—Squamous and eczematous eruptions had for a long time been treated by him, with good success, by means of the faradic current. He attached the soft sponge electrode, fixing the positive pole, and moving the negative all over the diseased surface.

SECOND DAY—MORNING SESSION,

Goldsborough, May 15th, 1878.

Society assembled at 9 A. M., Dr. Payne in the chair.

Dr. Shaffner, from the Special Committee, recommended that Dr. Anderson's resignation be accepted. Carried,

SECTIONS INSTITUTED.

Dr. Shaffner asked, in order to facilitate business, that the following resolutions be adopted:

Resolved, in order to systematize our work, and facilitate the transaction of business, there shall be instituted a series of sections, as follows: A section on Surgery and Anatomy; one on Obstetrics and Gynæcology; one on the Practice of Medicine; another on Materia Medica and Therapeutics; and one on Microscopy and Pathological Anatomy.

Be it further Resolved, That there shall be appointed at each annual meeting of the Society, a chairman of each section; such chairman to be selected by the President from those who exhibit a preference for any given section.

And finally, That all essays, papers and communications be submitted to the annual meetings of the Society by the respective chairmen of each section. Passed.

COMMITTEE ON NOMINATIONS.

The President announced the following Committee on Nominations: Drs. G. A. Foote, W. A. B. Norcom, W. C. McDuffie, J. J. Summerell, R. H. Speight, and W. T. Ennett.

DIPHTHERIA.

Dr. Chas. Duffy, Jr., of Newbern, read the annual essay on Diphtheria, by appointment. As Dr. Duffy's paper was referred to the Committee on Publication, we will not attempt its report.

Dr. Norcom thought that Dr. Duffy's address was admirable and exhaustive, but thought that he had omitted a remedy in his treatment, now much in vogue, which remedy was thymol. It had all the powerful properties of carbolic acid without being poisonous.

Dr. J. K. Hall, in continuation, also read a paper on the subject, which was referred to the Committee on Publication, therefore we do not attempt a summary of it.

Dr. McDuffie, of Fayetteville, made a few interesting remarks on the subject, detailing cases in his practice of pharyngeal paralysis, in which he kept the patients alive for some time by rectal alimentation.

Dr. Haigh, of Fayetteville, said, that he desired to enter his protest against the indiscriminate rejection of all local applications to the throat in this disease. He believed that there was an incipient stage, resembling very much follicular pharyngitis—in which stage careful examination would reveal generally in the sulcus posterior to or upon the tonsil a deposit which was not a false membrane, but of a fungoid character, the apparent nidus of the morbific matter. If this was destroyed, all febrile symptoms would disappear in eighteen to twenty-four hours, and the membranous exudation never would appear. When this deposit took place in the posterior nares or behind the velum, it frequently escaped observation and hence the fatality in these cases. Gentlemen speak of the pseudo-membrane as if it was the disease itself—instead of a result of blood poisoning. He proposes, therefore, that when we see these cases in time, we should apply with a soft surgeon's sponge the following:

℞
Tannin
Cupri Sulph. āā grs. x̄
Aquæ ℥ i.
M.
S. Throat-wash.

Apply once or twice very gently. As a general rule it will completely destroy the deposit, and act as a thorough astringent to the inflamed surfaces. Indiscriminate application to the throat after the first stage of the disease are certainly harmful. Use freely, also, a gargle of a strong decoction of red-oak bark. At the same time, give two teaspoonsful of Saturated Solution Potass. Chl. every hour. Do not give it in combination with other remedies, for he considers it simply of local use and not a blood remedy, and had never seen it of service in any but diseases of the mucous membrane and glands of this membrane—as typhoid fever, stomatitis, &c. He believed that many cases could be averted in their incipiency, and though it had been his misfortune to meet with many cases of death from diphtheria, and some seemed to be fatal necessarily, still, he was satisfied that if the profession threw aside local applications in the incipiency of the disease, there would be a far greater mortality. He did not desire to enter into the treatment of the disease after it had passed what he considered its first stage, because that had been fully discussed. As in all asthenic diseases, the supporting treatment must be correct. Nourishment every hour, and especially milk, with alcoholic stimulants used freely. Living in a turpentine region, it may be that our epidemics are milder than in other parts of the State, but certain it is that we do succeed in abating many cases which would eventuate in diphtheritic deposit if left to themselves.

Dr. Potter discussed the subject at length. He had had considerable experience in the disease, and noticed that it occurred near mill ponds and stagnant pools. He believed that it was a filth disease.

He had known several fatal cases circumscribed in the limits of the

Smithville garrison, and during the same visitation all the cases in the town recovered. Why the fatal line of demarcation should be so plainly drawn, was not yet determined. His treatment had been to use local applications of sulphurous acid, and internally, tincture of iron and quinine. He thought there were some strong reasons to believe that the disease was contagious, and cited a case in point. It was hardly necessary to say that nutrition was a matter to be kept constantly in view.

Dr. Thos. J. Moore, of Charlotte, agreed that malaria is associated with and affected by diphtheria; and thought that quinine should be largely used. His observation had led him to the conclusion that it is not confined to malarial regions; he thought that local applications are hard to make in young patients, and that some saccharine element ought to be used as a vehicle for medicinal substances, as well as steam applications, which he regarded as indispensable. Dr. Moore reported cases in his practice in young children, and one in a lady, who at the same time was nursing an infant, conclusively showing its communicability.

Dr. Bahnson was glad that some one agreed with him that the disease was enveloped in mystery. He believed that quick lime continuously sprinkled on the floor destroys the virus of the sputa, and prevents other cases from being so malignant. Saturating the sick room with steam from quick lime also, he thought was serviceable. He thought that tracheotomy in laryngeal complications ought always to be performed; even if a small per cent. only is saved by it. He mentioned several fatal cases in his practice after the operation. Dr. B., in course of tracheotomy sucked hastily, without thought, a mucous plug from a tracheotomy tube in the larynx, and was affected by diphtheritic virus; he was satisfied that the disease is communicable.

Dr. Joseph Graham, of Charlotte, thinks that the disease is infectious, propagated through the atmosphere and by contact. He has had considerable experience; has not been satisfied with any book treatises, and said many cases would get well without treatment, while some will die with the best treatment. He related some cases in which a father contracted the disease by the child's breathing into his mouth, and related a case in which he believed buttermilk cured the patient. The doctor maintained that if a patient vomits without nausea he will die in less than five days, and thinks the extent of patches bear no steady relation to the malignancy of the disease. He had been affected in the same manner as was Dr. Bahnson.

Dr. O'Hagan did not agree with Dr. Graham, as to the inefficacy of treatment. He believed that every effort should be made, however hopeless the case. He spoke of the antiquity of the disease, its cause, development and course, and said treatment was exceedingly valuable, necessary and appropriate. The first affection should have prompt attention to arrest the disease. He thought mild local applications of prime importance and that tracheotomy is useful, but, to be successful, must be performed at an early period before the bronchi are invaded ; and that every effort to save the case should be made to the last. Dr. Graham thought that Dr. O'H. did not quite understand him. He too spared no pains in treating his patients by every means promising relief.

Dr. Wood dwelt particularly on the use of chloral hydrate to be applied by steam atomization, it proving a valuable agent in his hands. He said the patient would submit to this rather than to gargles, and that enough chloral was usually inhaled to produce a calming effect, putting many intractable patients in such a condition that they would take nourishment passively, at least. The antiseptic property of chloral was so well known that nothing need be said in its praise.

Dr. Norcom said that no treatment could be relied on unless it was stimulants or nourishment. Medicine was generally a secondary consideration, although he did not neglect to use various vaunted remedies.

Dr. C. T. Murphy thought food and stimulants the main bulwarks in the treatment. The doctor had used the stomach pump, putting food directly in the stomach, and kept the patient alive for thirty days. He says give food by the stomach pump if necessary, or, by enema to the last.

Dr. Hines held that tracheotomy was out of place. He thought it bad surgery, not justifiable, and will not cure the disease, as he regarded it as constitutional, and the throat symptoms as only a local manifestation.

He was replied to by Dr. Bahnson, who insists on the operation to prevent asphyxia.

Drs. Summerell and Moore also believe in the operation of tracheotomy when resorted to in time.

(The discussion of diphtheria as we report it above does not do the speakers justice as we are aware. It would be impossible to condense in so short a space an interchange of views that extended over nearly four years. We would be pleased to give the different speakers the opportunity of elucidating unnoticed points in their remarks.)

SUBJECT FOR DISCUSSION AT THE NEXT MEETING.

The President appointed the following gentlemen the Committee for the selection of a subject for discussion next year, and the essayist: Drs. J. R. Hall, Thomas F. Wood and G. W. Graham.

The Committee selected the subject of Spondylitis and its treatment, and Dr. M. Whitehead as the essayist.

Drs. H. T. Bahnson, G. G. Smith and D. G. Bullock, compose the Committee on Time and Place of meeting.

After some brisk competition, Greensborough, Edenton, Raleigh, Concord and Asheville being in nomination, Greensborough was fixed upon as the next place of meeting in 1879.

BOARD OF EXAMINERS.

The gentlemen below named constitute the retiring Board: Drs. R. L. Payne, G. A. Foote, Charles Duffy, Jr., C. T. Murphy, C. J. O'Hagan, W. A. B. Norcom and J. W. Jones.

Their sessions were held during the entire meeting. The method of examination is similar to the old plan adopted by most medical colleges. Each applicant is examined separately, the examiner noting his standing, by a scale of figures agreed upon by the Board. At the close of the session the standing of each is estimated and passed upon, when the successful applicant is eligible to membership in the Society. At no former meeting has a more earnest support been given to this valuable part of the machinery of the State Society, and in spite of the constant complaint we meet with from every quarter of the low standard in medical schools, the result at this meeting has been gratifying.

AFTERNOON SESSION—SECOND DAY.

Dr. Richard H. Lewis, of Raleigh, read a paper on some cases embraced in his specialty—ophthalmology. Case 1 *Capsulo-lenti-*

cular Cataract. Case II *Corneitis.* Case III. *Amblyopia.* Referred to the Committee on Publication.

Dr. Bahnson gave a verbal account of his plan of treating epiphora with a stylet of his own construction.

Dr. T. D. Haigh introduced the following resolution:

Resolved, That Section 2, Article IV, of the Constitution be altered, and the following substituted: There being objection it lays over under the rule until the session of 1879.

STATE BOARD OF HEALTH.

The Executive Committee of the Board of Health reported through their Secretary as follows:

REPORT OF THE SECRETARY AND TREASURER OF THE STATE BOARD OF HEALTH.

At the Salem meeting of the Medical Society of North Carolina the bill creating a State Board of Health was accepted by the Society, not because it was regarded of much advantage to us, but as the beginning of a good work which would some day redound to the honor and advantage of our commonwealth. I am satisfied that nothing but a sincere desire to make a beginning in the great work of sanitary reform and to put the ball in motion, could have induced this body to have accepted such a great work with such trifling means.

As soon after my election as your Secretary, as was practicable, I sent written communications to every county in the State where the name of a physician could be obtained, except in Graham county. I set forth as clearly as possible that the object of the Board of Health was to organize a systematic plan of registration in every county, urging upon them to institute preliminary organization of County Medical Associations, which would then prepare them for establishing a County Board of Health. Some replies came, some replying that they had no acquaintance with the Constitution and By-Laws of our Society, and, therefore, could not act until informed. Others replied that there were not enough regular physicians in the county to organize. As there were no printed copies of the Constitution on hand, I had enough copies printed to supply every correspondent.

I received replies from forty counties. In some counties an attempt was made to organize, notices being sent out, and after one or two meetings the effort failed. Not discouraged by this failure, I had some blanks printed which could be easily used for the purpose of collecting statistics, even in absence of an organization. I herewith present copies of these blanks:

The Pocket Record of Prevailing Diseases, was offered by private letter, and through the public press to any persons interested. In addition to this, I had blanks printed "For Physicians and Householders," and circulated wherever I could find a physician willing to give me his attention. The intention of this was to get information from any source, lay or medical, to enable us to trace the invasion of "Diseases Dangerous to Public Health."

A blank for the collation of "annual statistics by months," was issued to all Secretaries of Societies, and in many places where there were no such officers, copies were sent to such physicians as it was presumed could be roused to interest. Blank B. was intended to get statistics of the features of the soil, climate, drinking water, extent of forests, area of swamp and bog-land, rivers and the character of their margins, sewerage and drainage, character of public buildings, &c. It was hardly hoped that in one year, with almost no organization, that these reports could be made out correctly, but my design was to have them before the auxilliary societies to remind them of the scope of the enquiries of the State Board, at least.

In addition to this, in consideration of the frequency of drowning in the Cape Fear River principally, I had published for distribution among the ships and steamboats in the port of Wilmington, a card with the instructions for "Timely Aid for the Drowned and Suffocated." These are hung up conspicuously, as far as I have noticed, and have been well received. It is designed to distribute them still farther, when the addresses of those most interested can be obtained.

I am sorry to report that but few organizations have regularly reported, and that most of the material furnished me has been from individual sources. Had the reports obtained been unsatisfactory as to matter, I would have esteemed it a great gain to have had the attention of the profession of the entire State. In fact an extensive correspondence has been unremittingly maintained for twelve months. Hardly less than two hundred letters a month have been issued from my office, including circulars, since I undertook the task assigned me.

The results have been unimportant, but not discouraging. It could not be expected that statistics could be collected with much regularity without there was at least one paid officer in each county to do the clerical work, and keep the local correspondents up to their duty.

In corresponding with physicians I have suggested the following plan:

After organizing a County Medical Association, and County Board of Health, elect a Secretary with a view to his fitness as a registrar and Superintendent of Health. Notify then the town or county authorities of their readiness to cöoperate with these officials, in such duties as appertain to a Board of Health.

In New Hanover County, Committees were appointed as follows: "On Epidemics and Endemics," "on Quarantine," "on Drainage and Water Supply," "on Statistics," and "on Sanitary Condition of Public Buildings." A like division of the work was recommended to other counties. In the County of New Hanover, there was already existing an officer in the pay of the city, and therefore it was thought well enough to sustain him in all his work as far as possible. Our organization had the effect of inducing the City Superintendent to keep the mortuary statistics, and at our suggestion to institute a course of inspection of private premises, with a view to mitigating nuisances and gaining such information as would be useful in future management of the hygienics of the city. As Dr. Wright, the Superintendent, to whom we refer, was the only paid Superintendent, so was he the only one who made regular reports. His inspection before referred to, extended to the examination of the relation of wells and cisterns to privies, and stables to dwellings, and the method of disposing of garbage adopted, &c. These examinations show that the rudiments of sanitary science have yet to be learned by the masses of the people.

I respectfully suggest as the result of my experience, that we should endeavor to get a bill through the Legislature which will secure for us the following features:

There should be a Board of Health in each county having a town of 300 inhabitants. This Board of Health should be composed of all the doctors elligible to membership in the County Society. The Chairman of the Board of County Commissioners and Mayor should be also, members of the Board of Health. The Secretary of the

County Society should also be Registrar of the Board and Superintendent of Health, with a salary from $250.00 to $600.00. For instance, a county with a town of 300 inhabitants should have a salary of $250 ; of 500, $300 ; of 1000, $350 ; of 2000, $400 ; of 3000, $500 ; of 6000 and up to 15000 or more $600.

The salaries of the Registrar and Superintendent to be paid by the county.

The duties of the Registrar and Superintendent should be clearly defined.

The State Board of Health should be composed of eight members chosen from the State Medical Society, and four appointed by the Governor. Three members to hold office for six years, three for five years, three for four years, and three for three years. From this number a President should be elected, and also a Secretary by the Board as thus constituted. The Medical Society of North Carolina should also have power to elect successors from their body as their terms expired. The expenses of the President and members should be paid when called upon to travel to the meeting of the Board.

The salary of the Secretary should be $—— —and the allowance of the Board for stationary and other expenses, $1000 to be paid out of the public treasury.

Reports from members of the auxiliary Boards should be made compulsory. Any one refusing to make a return of deaths, or the invasion of diseases dangerous to the public health after due notification by the County Secretary, should be subject to a fine of $1.00 for each offense, the fine to be collected by the Sheriff upon writ, and to go to the county treasury, such sums to go to the payment of the salary of the Registrar of the county.

Reports should be made monthly to the local Boards and from them to the State Board, within ten days of the end of the preceding month. Copies should be retained by the local Secretary and by him consolidated, and his annual statement returned to the State Board of Health Secretary, as early as possible.

Among other duties, the County Registrar and Superintendent of Health should inspect weekly all the county public buildings, viz : school houses, jails, poor houses, work houses, and make a monthly written report of the diet and ventilation of the penal institutions, and the number of sick. He should also have charge of the public vaccination, using vaccine furnished from the State Board of Health. It should have been mentioned in the proper place that it should be the duty of the Secretary to keep fresh virus always at his command, each county paying for it at the actual cost.

The County Registrar and Superintendent should be empowered to abate nuisances, which have been passed upon by the Committees having charge of the matter, and upon information of such action, the Sheriff be required to issue a process requiring an abatement of the nuisance by the party charged. But failing in a certain time to comply with this, the nuisance to be abated by the county or city, and the charges collected of the owner of the premises.

Failure to report to the local Secretaries, a case of disease dangerous to the public health, by any one practising medicine or by the nurse, subjects the delinquent to a fine of $5.00 to be paid into the county treasury.

THOMAS F. WOOD, M. D.,
Secretary State Board of Health.

Wilmington, N. C., May 10th, 1878.

Drs. Satchwell, Thos. J. Moore, Chas. J. O'Hagan, and others expressed the hope that there was a brighter day in the future for the Board of Health. The public had to be educated to the necessity of it. Dr. Moore, especially, believed that when the public could be made to understand what a great and necessary work it was that we had undertaken, he thought our representatives in the Legislatures would give us aid. He had faith in the ultimate success of so disinterested a plan to improve the condition of the people.

As no action was taken to change the committee formerly serving to execute the duties of the Board, the inference is that they are continued.

Adjourned until 8½ o'clock, when the Society re-assembled at the Presbyterian Church to hear the address by the orator for the year, Dr. W. T. Ennett, of Pender County.

DR. ENNETT'S ORATION.

The subject of Dr. Ennett's oration, "Harvey as the True Discoverer of the Circulation of the Blood."

The subject was particularly appropriate because of the recent tercentenary of the birth-day of the great father of British physiology. Just three hundred years ago there was no science of physiology. The medical profession was not as learned in physiology as a school girl of to-day. Darkness and empiricism stood where the light of the nineteenth century now stands and irradiates continents. Then the great Harvey was born. He described his personal appearance and habits ; his early education ; his studies in Padua ; his final success after long weary years of doubt; but having unfailing enthusiasm, he evolved a certain principle from seeming chaos. His detractors were many. It was nothing new to decry Harvey, and to deny his claims. Great men had done it. In our country, Dr. Redman Cox had labored to disprove his claims ; in Rome they had had the temerity and unfairness to erect a tablet to Cesalpinus as the real discoverer. Dr. Ennett analyzed these fallacies, and made it clear that the fame of the great physiologist would forever stand vindicated in spite of all.

His address was well received by an appreciative audience of citizens of Goldsborough, as well as of the profession.

MORNING SESSION—THIRD DAY.

Dr. W. C. Murphy offered a resolution that Dr. Ennett be thanked for his able and interesting oration, and that a copy of it be furnished for publication.

REPORT OF THE BOARD OF CENSORS.

Mr. President:—The Board of Censors has had referred to them, by the Raleigh Academy of Medicine, the action of that Academy, in regard to one of its own members, who is also a member of this Society.

Dr. R. H. Towles, of Raleigh, has been expelled from the Raleigh Academy of Medicine, for marrying a woman of the town, a copy of the license and of a return made by the officiating magistrate have been received by a Committee of the Academy.

This Board would respectfully recommend that Dr. R. H. Towles be expelled from this Society, for conduct unbecoming a gentleman, a physician and a member of this Society.

Respectfully submitted,

P. E. HINES, M. D.,

Chairman,

Dr. P. E. Hines' report from the Raleigh Academy of Medicine expelling Dr. R. H. Towles for conduct unbecoming a physician and gentleman was adopted.

DELEGATES TO THE VIRGINIA MEDICAL SOCIETY.

Report of delegates to other Societies was called for. Dr. O'Hagan represented this Society in the last meeting of the Virginia Medical Society assembled in Petersburg. It was presided over by Dr. James L. Cabell, Professor in the University of Virginia. He noticed that their method of proceeding was superior in many respects, and might be copied by us with advantage. All work was subordinate to scientific professional work. Dr. O'H. was received with that warm cordiality proverbial of the citizens of Virginia. He thought exchange of visits desirable and in many respects profitable.

A letter was received from Dr. Duncan N. Patterson, of Richmond County, deeply regretting his inability to attend this meeting Dr. Patterson enclosed the Constitution and By-Laws of the Pee Dee Medical Association, which were approved.

NORTH CAROLINA MEDICAL JOURNAL.

Dr. O'Hagan wished to call the attention of the Society to the publication of our transactions for the coming year. Since our last meeting, two of our members, Drs. M. J. DeRosset and Thomas F. Wood has commenced the publication of the NORTH CAROLINA MEDICAL JOURNAL, with a courage which promised success. It was very sure that our medical literature was behind that of many States, and it was our duty, as it ought to be our pleasure to foster such a creditable work.

Dr. Hines agreed with Dr O'Hagan, and he thought the Society ought to give every encouragement to its own State Medical Journal. This Journal has already shown sufficient ability to predict for it a useful future. It could attain whatever position in medical literature that the Editors, by the aid of the profession, chose to make for it. Every doctor in North Carolina should take the Journal and interest his friends in it. He then offered the following resolution :

Resolved, That the Medical Society of North Carolina takes pleasure in recommending the North Carolina MEDICAL JOURNAL to the profession of the State, and that the Proceedings of this meeting be published in its columns. Carried.

Dr. Satchwell and Dr. C. T. Murphy also added words of commendation to that of the other gentlemen.

REPORT OF COMMITTEE ON CREDENTIALS.

The following gentleman have passed the examination of the State Board of Medical Examiners, and recommended for membership in the Society:

Drs. C. G. Bryan, Rich Square; J. R. McLellan, Mooresville; Richard K. Gregory, Greensborough; W. W. Jones, Raleigh; W. H. H. Cobb, Goldsborough; Algernon M. Lee, Clinton; D. Stuart Lyons, Paul B. Barringer, Charlotte; E. H. Hornaday, Willow Green: John A. Pollock, Kinston; John H. Ficker, Henderson; Peter McLean, Shoe Heel; Richard J. Noble, Selma; and J. Wellington Faison, Fulton.

The Chairman on Credentials beg leave to make the following special report in the case of Dr. R. K. Gregory: He confesses to a violation of the Code of Medical Ethics, by certain irregularities such as advertising in the public press, but now renounces all former acts in conflict therewith, and promises that in the future he will comply with the Code and in good faith will sign the Constitution and By-Laws and obey the same strictly. On these conditions we recommend him for membership. Report was approved and adopted.

REPORT OF COMMITTEE ON NOMINATIONS.

For President:
Dr. Charles Duffy. Jr., Newbern.

Vice-Presidents:
Dr. J. A. Gibson, Concord.
" Willis Alston, Littleton.
" James McKee, Raleigh.
" A. A. Hill, Lexington.

Treasurer:
Dr. A. G. Carr, Durham.

Secretary:
Dr. L. J. Picöt, Littleton.

Orator:
Dr. W. W. Lane, Wilmington.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. W. C. McDuffie, Fayetteville.
" W. A. B. Norcom, Edenton.
" J. F. Miller, Goldsborough.
" H. Otis Hyatt, Kinston.
" R. B. Haywood, Raleigh.
" W. A. Cheatam. Henderson.
" G. A. Foote, Warrenton.
" T. J. Moore Charlotte.
" R. L. Payne. Lexington.

DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Dr. Robert I. Hicks. Williamsboro.
" W. R. Wilson Granville.
" J. A. Tucker, Henderson.
" George Graham, Raleigh.
" W. T. Ennett, Pender.
" W. T. Bahnson. Salem.
" W. S. Lyon, Charlotte.

DELEGATES TO MEDICAL SOCIETY OF MARYLAND, BALTIMORE.

Dr. J. W. McKee, Raleigh.
" D. N. Patterson, Richmond.
" J. B. Hughes, Newbern.
" W. J. Royster, Raleigh.
" G. G. Thomas, Wilmington.

DELEGATES TO THE MEDICAL SOCIETY OF SOUTH CAROLINA.

Dr. R. F. Lewis, Lumberton.
" R. H. Lewis, Raleigh.
" J. McDonald, Washington.
" F. W. Potter, Smithville.
" J. B. Jones, Charlotte.

PUBLICATION COMMITTEE.

Dr. Thomas F. Wood, Wilmington.
" C. J. O'Hagan, Greenville.
" Wm. Geo. Thomas, Wilmington.

Dr. S. S. Satchwell, Pender.
" W. J. H. Bellamy, Wilmington.
" J. F. Miller, Goldsborough.
" L. J. Picöt, Littleton.

Respectfully submitted,
G. A. FOOTE,
W. A. B. NORCOM,
J. J. SUMMERELL,
W. R. WILSON,
W. T. ENNETT,
R. H. SPEIGHT,
Committee.

Dr. A. Holmes, of Clinton, read a paper on Puerperal Eclampsia, which was referred to the Committee on Publication.

Dr. Robert I. Hicks read a paper on Puerperal Eclampsia which was referred to the Committee on Publication.

SECTIONS.

The following gentlemen were appointed Chairmen of the Sections:

Surgery and Anatomy.—Dr. Charles J. O'Hagan.
Obstetrics and Gynæcology.—Dr. H. Otis Hyatt.
Practice of Medicine.—Dr. W. A. B. Norcom.
Materia Medica and Therapeutics.—Dr. G. G. Smith.
Microscopy and Pathology.—Dr. G. G. Thomas.

UNLICENSED DOCTORS NOT ELLIGIBLE TO STATE APPOINTMENT.

Dr. Hines called attention of the Society to the fact, that a physician was filling the place of assistant in the Asylum for the Insane, who has never been before the Board of Medical Examiners. The question was warmly debated by Drs. Norcom, O'Hagan and others, and finally the following resolution, introduced by Dr. J. W. Jones, of Tarborough, prevailed.

Resolved, That the Medical Society of the State of North Carolina, disapproves of the appointment of medical officers in any public institution of the State, who have not passed a favorable examination before the Board of Medical Examiners.

Dr. R. L. Payne, President, delivered his valedictory on retiring from the chair, "*Influences which Affect the Child Before Birth.*"

The law of heredity was first announced in the Mosaic law. The law that "the sins of the father are visited upon the children to the third and fourth generations" went forth as an unalterable edict, and has been woven into the social fabric. A neglect of the laws of heredity was more fatal than "the pestilence that walks at noonday." Syphilis, scrofula, epilepsy and other diseases were entailed upon our offspring by our sins. There was no way to escape the penalty which syphilis entailed. Its blight was sure to follow. So other diseases were unerringly transmitted.

The children of drunkards are apt to inherit the taste for stimulants, even more than this, idiocy and feeble minds so often are the inheritance from drunkenness.

No silly woman ever gave birth to a Jackson or a Lee. The stock must be vigorous to have vigorous scions.

It is equally a merciful provision that though the bad qualities descend, the good qualities are frequently the heritage of children. The doctor believed fully that the mental impression of the mother often marks the children *in utero*. He has seen enough in his experience to satisfy him, that "birth marks" result from exterior impressions. He cited a large number of cases to sustain his opinion, the reading of which entertained and instructed the audience.

Drs. O'Hagan and Summerell conducted the newly elected President (Dr. Charles Duffiy, Jr.,) to the chair.

Dr. Duffy thanked the Society for the unexpected honor, which by their partiality he had been elected, and he promised to serve with fidelity, according to his ability.

EVENING SESSION—THIRD DAY.

Society called to order, Dr. Charles Duffy, Jr., President, in the chair.

Dr. Wood, of Wilmington, by permission of the President, placed on exhibition, by request of the manufacturers, samples of "*Trommer's Extract of Malt;*" *Scott's Emulsion of Cod Liver Oil;*" some *Vest-Pocket Vial Cases* containing samples of *McKesson & Robbins*' gelatine coated pills; *Am Ende's Borated and Red Cross and Styptic Cotton;* "*Seven Springs Iron and Alum Mass.*"

Dr. Picöt exhibited a truss made by P. Werum, of Toledo, O., and showed its manner of application.

Time was allowed for their examination and distribution and the Society proceeded to business.

Dr. McDuffie reported a case of dislocation of the hip-joint downwards into the obturator foramen. The patient was a little girl, who walked about for several days after the accident, the parents thinking it was a stone-bruise on the heel. Reduction was effected by manipulation. The case was one of interest, from the fact that the hip dislocated spontaneously three times after its reduction.

COMMITTEE ON OBITUARIES.

Dr. J. W. Vick, Chairman of the Committee on Obituaries, made the following report:

To the Medical Society of North Carolina:

The undersigned respectfully submit the following report:

That they have examined the roll of membership and find the following members deceased, to-wit:

Drs. W. R. Sharpe, of Fulton; G. H. Macon, Littleton; C. G. Cox, Richlands: F. S. Alexander, Randalsburg; and O. P. Huston, Mount Olive.

Resolved, That in the death of the above members, the Society has sustained a loss of some of its most ardent supporters and most faithful guardians, and that the sympathies of the Society are hereby tendered to the bereaved families of the deceased.

J. W. VICK,
H. M. ALFORD,
W. DEBNAM,
F. A. GIBSON,
Committee.

The President announced the following gentlemen a Committee to examine the Secretary's book: Drs. Shaffner Vick and Debnam.

The Committee reported that they found the Secretary's books and papers neatly and properly kept, and commendable in every respect.

ELECTION OF THE NEW BOARD OF MEDICAL EXAMINERS.

The election for the Board of Medical Examiners resulted in the choice of the following gentlemen:

Dr. Thomas F. Wood—Examiner in Chemistry.
" H. T. Bahnson—Secretary and Examiner in Physiology.
" T. D. Haigh—Examiner in Obstetrics.
" Geo. L. Kirby—Examiner in Anatomy.
" Peter E. Hines—Prest. and Examiner in Practice of Medicine.

Dr. Joseph Graham—Examiner in Surgery.
“ R. I. Hicks—Materia Medica and Therapeutics.

These gentlemen constitute the Board of Medical Examiners for the next six years. The assignment was made the night succeeding the election. The address of the Secretary is Salem.

Dr. Duffy made some remarks on the “Management of the Perineum” and reported a case of poisoning by Gelsemium.

Dr. C. Tate Murphy spoke at length on the value of *Gelsemium sempervirens* tincture, in treating malarial fever. He lived in a malarial district, and through a series of years he had carefully noted the effects of gelsemium. He found that relapses were less frequent after the use of this remedy than after the use of the cinchona alkaloids. [Many other points were brought out in this discussion which we do not mention because of insufficient notes. We hope Dr. M. will make his experience the subject of a contribution to the JOURNAL.]

After the business was transacted of the usual routine character, the Society adjourned to meet in Greensborough on the third Tuesday in May, 1879, at the hour designated by the local Committee of Arrangements.

L. JULIAN PICÖT, M. D.,
Goldsborough, May 16th, 1878. Secretary.

* * *

ERRATA.

It is due to Dr Octavius A. White to make the following corrections in his excellent article in our April Number. We are sorry its sense was obscured by errors of proof-reading.

Page 214, 8th line from top *derived* for *devised*.
“ “ 8th “ “ bottom *every* for *any*.
“ 216, 1st line. *recording* for *receding*.
“ “ 8th line from top, *until* for *while*.
“ “ 9th “ “ “ *even* for *seen*.
“ “ 11th “ “ “ each before systole.
“ “ 12th “ “ “ *unsustained* before systole,
“ “ 15th “ “ “ *which* after *movement*.
“ “ 18th “ “ “ *every* for *a*.
“ “ 19th “ “ “ *at* for *the*.
“ “ 22d “ “ “ *a* for *the*,

NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

Number 6. Wilmington, June, 1878. Vol. 1.

ORIGINAL COMMUNICATIONS.

A CONTRIBUTION TO THE FLEXION TREATMENT OF ANEURISM.

By L. McLane Tiffany, M. D., Professor of Operat. Surgery,
University of Maryland, etc., etc.

The treatment of popliteal aneurism by flexion is recognized as so thoroughly proper at the present time, as scarcely to call for comment, yet, in the two following cases something may be found worthy of attention: In the first case, the beneficial results of strong flexion, lamination within the sac already being present; in the second case, good results appear to have followed the treatment, although the condition of the patient was hopeless. * * * white, single, aged 35 years, tall, slender, came under observation, September 19th, 1876, twelve years ago. * * * contracted a chancre, which was followed by roseola, alopecia, etc. Several years ago, he suffered from a pustular syphilide, which disappeared under appropriate treatment, since which time no manifestations.

September, 1876, he complained of pain in left ham, which had existed four or five days and was very lame. Referred the commencement of his trouble to very violent exercise in a gymnasium one week previously. Pulse rather rapid, 100 per minute.

Left leg and ham swollen, the latter reddened and painful to touch; circumference of left thigh above patella, two inches greater than that of right at same point. Pulsation very apparent in left popliteal space, but no circumscribed tumor to be made out, owing to infiltration of subcutaneous tissue. Patient was directed to remain quiet on a lounge, light poultices were applied to relieve evident irritation of skin, and in view of syphilitic antecedents, potassic iodide, in gr. xv. doses, was given three times daily. During the following two weeks marked improvement in the inflammatory symptoms was seen, but the swelling persisted, decided aneurismal bruit was audible, while the foot and leg became œdematous.

Oct. 11th. Two horse-shoe tourniquets were applied over the course of the femoral artery,one just below Poupart's ligament; the other about the middle of the thigh, and by tightening or relaxing these according to indications, the blood current was interrupted without producing excoriation of skin, or any undue pressure at any one spot. It is found that pressure for two hours from one tourniquet is as much as can be borne without serious discomfort, and No. 2 is then tightened, No. 1 being relaxed.

Oct. 19th. Continuous pressure since last date, confinement to bed, iodide of potassium, gr. xxv, with gtt. xxv of iodide of iron, thrice daily. Pulse 100. Temperature 99°. Circumference of left thigh 1¾ inches greater than right.

Oct. 22. Pulse 115. Temperature 99.2°. Pulsation in tumor seems to be more easily arrested than formerly. No other change. Tincture digitalis, gtt. viij, thrice daily.

Nov. 1st. Little or no change in condition of limb. A tumor not clearly circumscribed can be made out in left ham at site of pulsation.

Nov. 13. Pulse 80. A tolerably firm tumor in left popliteal space ; pulsation limited to tumor; œdema of leg much diminished. Digitalis omitted.

Nov. 25th. Pulse 100. Pulsation in tumor more marked. Digitalis resumed.

Dec. 5th, Pulsation very slight on relaxing the tourniquet.

Dec. 26th. Diminution in size of leg, pulsation very faint, tumor more firm.

Jan. 5th, 1877. Shortly after last note (Dec. 25th) and up to present time, the pressure of the tourniquet has given rise to tonic spasm of the extensor muscles of the affected thigh. The attacks are painless and last probably half a minute. As a result the tourniquet has not been applied for three days.

Jan 13th. Difference in circumference of knees one inch. Pulsation as before. Patient allowed to sit up. Irritability of muscles continues. Medicine stopped.

Feb. 18th. Tourniquet, combined with flexion at knee, has been tried during past week for two hours at a time. For the first four days no improvement resulted. Yesterday and to-day pulsation is less, and tumor harder.

The above notes are from the attending physician.

Feb. 19. Saw patient for first time. Pulse 120. Temperature 99°. Left ham one inch larger in circumference than right, contains a firm fusiform tumor, characterized by distensile pulsation, synchronous with pulse. Pressure on femoral in groin causes very decided diminution in size of tumor, with abolition of pulsation. Bruit faint.

Diagnosis.—Aneurism of popliteal partially filled with coagulum.

Treatment.—Firm flexion of leg on thigh. Tincture verat. virid. to reduce frequency of pulse. Magendie's solution hypodermically to abolish pain.

The limb was bandaged from toes to knee, and treatment as above. The pulse was reduced to 80 per minute, and kept there.

Feb. 20th. Flexion continues for 30 hours. Pulsation scarcely perceptible, tumor firm.

Feb. 22d. No pulsation. Tumor hard.

Feb. 23d. Very faint pulsation, which ceased after two hours flexion.

From this time all went well, no more pulsation or progressive diminution of tumor. Patient recovered completely. A certain amount of stiffness remained for some months, disappearing gradually.

An examination during the summer of 1877 showed enlargement of arteries on either side of patella, *compensative*.

The pressure by tourniquet in this case was continued, during four months combined with rest and moderate diet, yet, when seen by me first, blood was passing through the dilated artery.

There was, however, a very decided deposit of clot within the sac, as instanced by firmness and diminished pulsation, and flexion of the limb was undertaken, with a view not so much of causing additional coagulation, as of dislodging a portion of fibrin already deposited, so as to plug the hole of the efferent vessel. The tumor would have been strongly manipulated (Fergusson) had it not been situated so deeply in a limb already hyperæsthesic and painful.

As the patient still preserves the limb, the exact method by which a cure was brought about, must remain in doubt.

It may be noted that the popliteal artery appeared to be obliterated as high as the opening in the adductor magnus.

The pain suffered by the patient was not great, but one injection of morphia (m vij. Magendie) being required, and this was administered two hours after the commencement of flexion. In addition to the gymnastic experience already referred to, the patient recalls the fact that two days before consulting a physician, while getting out of his bath, he felt a very acute pain and burning in the left knee and leg which passed off gradually. The patient is greatly addicted to tobacco, and at times has used liquors freely, though not to excess.

R. B., negro, very old and feeble, came under observation November 19th, 1877, suffering from pleurisy in right side. Under proper treatment the effusion disappeared. He continued weak, although able to move about the room, and it was apparent that he would not live long.

Jan. 11th, 1877, he called attention to his right knee, complaining of pain. Examination showed a strongly pulsating tumor filling the popliteal space with well marked aneurismal bruit. Pressure on the femoral in the groin caused partial subsidence of the tumor with entire abolition of pulsation and bruit. The upper portion of the swelling was distinctly circumscribed, the lower portion somewhat diffused and more persistent. The patient could give no history of commencement, or progress of his affection, being somewhat weak-minded. The anterior and posterior tibial arteries could be felt beating at the ankle. Case was watched until January 15th, and the swelling was found to increase decidedly. The diagnosis lay between a very vascular cancer of bone, and ruptured aneurism. Measurement around each knee showed the right circumference 1½ inches larger than the left.

In the patient's condition amputation was not to be thought of, for he would have died on the table; so flexion was resorted to.

Jan. 15th. Flexion of leg on thigh to extent of arresting pulsation in tumor, and continued from 3 P. M. until 6 A. M. on the 16th—15 hours. The pulsation did not recur, the limb was enveloped in cotton and raised. A sensation of pins and needles was complained of with numbness of the extremity below the knee. The right leg remained somewhat colder than the left, for three or four days only ; pulsation in the arteries about the ankle did not appear. The weight of the leg caused an excoriation of the skin on the most prominent part of the calf.

Three days after flexion, January 19th, the circumference of the right knee began to diminish rapidly. Patient died quietly, January 26th, apparently from inanition. *Post-mortem* twenty hours after death :—right lung everywhere adherent to chest-wall. Arteries markedly atheromatous throughout the whole body. The appearances usual in very advanced age were seen, but no special disease anywhere. The right popliteal artery was the seat of two aneurisms ; the upper one filled with firm, partially decolorized clot ; the lower one was ruptured on its lower and outer aspect, the rent extending longitudinally about one inch. Immediately outside of this aneurism was a false aneurism the size of an orange. The upper arterial dilatation was about one inch by two inches, fusiform, the lower not larger than a good sized walnut. The popliteal artery was filled by firm clot from the hole in the adductor magnus to the upper aneurism ; it was also filled with clot between the two tumors, for an inch and a half, and finally, it was patent below the second aneurism. The walls of the lower aneurism were stiff from atheroma, and it was filled with clot moderately firm, not so stiff, however, as that filling the upper one ; the contents of the false aneurism were of like quality; coagulation of the blood in the upper aneurism and adjacent artery evidently occurred at the time, and, as the result of flexion, consolidation in the lower dilatation and intervening vessel took place subsequently. It is a point worth noticing that gangrene of the extremity did not make its appearance, notwithstanding the age of the patient, plus the consolidated aneurism, by way of local complication. Verat. virid. was not given at the time of flexion, the pulse being slow and regular.

THREE CASES OF LITHOTOMY.

Occurring in the Practice of Drs. Love and Murphy.

Reported by Dr. P. L. Murphy, Wilmington, N. C.

Lithiasis is not a very uncommon disease in Eastern North Carolina, but the cases are usually adults, who have nephritic colic, and who generally pass the small calculi through the urethra. Many of these cases have come under our personal observation, and a greater number have been related to us by our professional brethren. Lithotomy is rarely performed in our part of the State, and so far as I have been informed, lithority has never been attempted. It is not because our surgeons lack either the skill or ability to perform these operations, the reason is simply this, they never have the cases.

In reporting these cases it is not pretended, of course, that they are rare, or that the treatment is new, but it is believed that they are of sufficient interest to be published.

During the summer of 1875, Edward, a healthy looking well nourished quadroon about eight years old came under our notice with symptoms of stone in the bladder. He was sounded with a silver catheter—the only instrument at hand—the result was not satisfactory.

Several months having elapsed, he was again sounded with a steel instrument, in the presence of Drs. Love and Thomas, Jr. At this examination the calculus was easily detected by all present.

The operation was postponed from time to time, until April, 1876. Drs. Love, Wood, Thomas, Jr., West and Mr. John Hartsfield, a medical student, were present, and kindly gave very efficient aid. The lateral lithotomy was chosen. Chloroform was administered. The bladder was entered with little or no difficulty, but some trouble was experienced in seizing the stone with the forceps ; considerable force was required in its extraction on account of its size. The calculus was a large kidney-shaped concretion of triple phosphates, weighing exactly four hundred and eighty grains, two inches long and one inch in diameter. Longitudinal section demonstrates that it was originally two stones, which, after their entrance into the bladder had become united.

There was little hemorrhage, and it was thought necesssary to apply only a wet dressing by means of the T bandage. Several hours after the operation, we visited the patient and found that considerable hemorrhage had occurred and was in continuance. The clot which had formed in the bladder and wound having been broken up and turned out, the bladder was well washed with cold water by means of a Davidson syringe. The patient being difficult of control and it being deemed inexpedient to again administer the anæsthetic, he was tied as for lithotomy. A parachute formed by attaching a piece of patent lint to a flexible female catheter was then passed into the wound, and distended by packing charpie around the catheter. Notwithstanding this, hemorrhage continued, when the apparatus was removed, and wound swabbed with Monsel's solution until the bleeding ceased when a new parachute, dipped in the same solution was passed into the wound and packed as before. There was no further trouble with the case, except a moderately severe attack of malarial fever, which yielded promptly to quinine. I have frequently observed in our malarial district that surgical cases of any character whatsoever, are sooner or later seized with miasmatic fever unless the proper prophylactic means be used. One of my professional friends lost a very interesting case on whom he had operated a week before for ruptured perineum, by malignant remittent fever. This digression is made in the hope that the younger members of the profession who may see this will profit thereby. Quinine should be used at all seasons of the year in injuries or operations of any gravity.

As intimated above, our little patient made a rapid and complete recovery.

He continued in good health for eight or nine months, except an attack or two of malarial fever which was controlled by the usual remedies. At the end of this time, that is to say, in December, 1876, he was again troubled with symptoms of stone. His mother objecting to another operation, the treatment ordered was merely palliative, which so well succeeded that nothing more was heard of the case for over a year. The latter part of January, 1878, he had chill and fever which was treated with blue mass and quinine. He did not have any further fever for a week. On or about the first of February he was again attacked with chill and fever, the thermometer ranging from 101° in the forenoon to 105° in the afternoon.

For the first time our attention was drawn to complaints of pain in the region of the right kidney and ureter, which was much increased by pressure. There was tenesmus of the bladder after each act of urination and at times, before the evacuation of that organ. The tongue was coated with brown fur; anorexia and thirst were present; urine scanty and high colored. The treatment resorted to was the usual one for malarial fever, viz: quinine in large and repeated doses, opiates to relieve pain, &c., &c. This treatment had the effect of reducing the temperature from 105° to 103°, the pain in the kidney and ureter ceased almost entirely, or, at least, enough to warrant the omission of the opiate; the appetite was better, the tongue began to clear—in short, so much was his condition improved that we had every reason to believe a favorable prognosis might be given. His condition remained thus for a week or ten days, when there was a further reduction of the temperature to 101° in the evening, 99° in the morning, but the appetite had become poor; there was much pain in urination; the urine for the first time contained pus; nausea and vomiting became prominent features. The only medicine now given was nitrohydrochloric acid and small doses of quinine, and laudanum when necessary. The most nourishing food was ordered, but he positively refused to take it, except in very small quantities. His mother informed me that he would almost always vomit after taking food, in fact, almost nothing would remain on the stomach. Pus in large quantities was passed by the urethra; the urine was scarcely perceptible—it was all pus to judge by the eye. The boy became rapidly emaciated. He would scream with pain when he was washed which was done several times a day, as there was incontinence. The only change made in the treatment was enemata of beef tea and milk. During this time the temperature again went up, ranging from 101° to 103°. Pain became so intolerable as to require morphia in large doses. Finally, he became semi-comatose and ceased to notice, but would reply intelligently to questions asked him. On the second day of coma he died.

Autopsy eight hours after death. The body was much emaciated. The left kidney was with difficulty torn from its capsule. It was much increased in size and weight, and had lost almost entirely its original shape. It weighed 4¾ ozs, 4½ inches long, 3 broad by about two inches thick—as large or larger than an adult kidney. On making a longitudinal section it was found to be studded with minute abscesses throughout, and in addition there was a large abscess the size of a small hen egg in the upper part of the organ, which had opened into the pelvis. The ureter was enlarged, thickened and suppurating. It readily admitted a 14 (English) sound. The right kidney was easily detached from its capsule, external appearance was normal, perhaps, a little paler than usual. A longitudinal section was made, and a large calculus 2¼ inches long, one inch wide at the middle, and ¾ of an inch thick. Its composition seemed to be chiefly the lithates on which there was a deposit of the phosphates. The stone is somewhat irregular in shape and weighs 140 grains. The kidney was very little more than a sac or a number of sacs (remnants of the calyces). The size of the kidney was about normal. It weighed 2¾ ozs. The pelvis and ureter as might have been expected were enormously distended. The lining membrane was thickened and suppurating, but not so freely as the left. The ureter would admit a man's little finger. The bladder as has been stated contained a stone, it weighs 120 grains, is composed of the urates encrusted with a phosphatic deposit. The orifices of the ureters were much enlarged, so much so that they allowed a backward flow of the contents of the bladder, the right being the larger. The mucous membrane indicated cystitis.

On the 31st of July, 1877, a mulatto boy, aged 18 months, was brought to the office with symptoms of stone. He was sounded and calculus found. The next day was appointed for the operation. The only preparation was to order a dose of castor oil.

August 1st. Dr. Love, assisted by Drs. Wood, West, Mr. John B. Hartsfield, and the writer, proceeded to perform the lateral operation. No difficulty was met until the bladder was opened when some time was consumed in seizing and extracting the calculus. It proved to be a small one weighing about forty grains. There was no hemorrhage of consequence but the wound was filled with a parachute packing. The patient did well for the succeeding twenty-four hours, at the expiration of which time a sharp attack of remittent fever was ushered in and lasted for several days. After the fever subsided there was no further complication, the patient making a good and complete recovery, within three weeks from the time he was cut. His health has remained good up to this time.

J. S., son of Hebrew parents, about two years old, came under our supervision in the summer of 1876, with symptoms of stone. Although we felt well assured of the presence of a calculus, and so informed his parents, no examination by the sound was permitted until he had passed through the hands of several practitioners. He again came under our treatment a month or two thereafter. He was sounded and a stone detected by Dr. Love.

Lithotomy was advised as the proper operation, but his parents dreading the knife, and in hopes that the stone might be removed by lithotrity, which we refused to perform, carried him to New York. The diagnosis was there confirmed by several surgeons. Dr. Hutchinson, of Brooklyn, performed lithotomy on him twice. He wrote a very perspicacious and graphic letter describing the case, which by his permission, I re-publish with this report.

479 Clinton Avenue,
Brooklyn, N. Y , Feb. 26, 1877.

Dr. Love :—*Dear Sir* :—On the 10th of October, 1876, I performed median lithotomy on the son of Mr. S—. The stone broke into a number of fragments, but the greatest care was used to remove with forceps and by thoroughly washing out the bladder with tepid water. He made a good recovery from the operation, but the symptoms of stone persisted. I again sounded him but was not satisfied with the result. I then sent him to Dr. Van Buren, who sounded him and detected another stone or a fragment. I then sounded him again, and having detected the stone removed two fragments by bi-lateral lithotomy on December 11th, 1876. He recovered satisfactorily, but pain so far as I can ascertain, continued *during* micturition only, and when his bowels are moved. I sounded him again to-day, but with negative results. I may remark that after the second operation the bladder was carefully explored over its whole surface with the finger and also with the sound through the artificial opening, both by myself and my assistant, a gentleman of skill and experience.

* * * * * * * * * * * *

I am very respectfully, yours,
J. C. HUTCHINSON.

In addition to the trouble mentioned by Dr. Hutchinson, he had spasm of the bladder. His general health was good. In June or

July of 1877, we sounded him, both by the natural passage with a steel sound and through a fistulous opening in the perineum with a silver probe. A stone was detected by both instruments. The fistula healed within two or three months. He remained under notice with no treatment until February, 1878, when Dr. Love performed lateral lithotomy. He experienced considerable difficulty in getting through the urethra on account of the thickening caused by cicatricial tissues, the result of the two preceding operations. He removed three phosphatic stones, one about the size of a pigeon's egg and the other two nearly as large as buck shots. The wound was treated as in the two other cases, that is, it was packed by means of the parachute. He made a good recovery with the exception of incontinence during the day. At night, or while he was asleep the urine ceased to trickle away. This was treated with belladonna and strychnia. Whether the medicine had any beneficial effect or not, may be doubted, but at all events he recovered entirely. Since the operation he has had no pain whatever. His health is perfect in every respect.

QUANTITATIVE ESTIMATION OF GLUCOSE.

When sugar is boiled with sulphate copper solution (of a known strength) the change occurring stood in the relation of one atom of the former to five atoms of cupric oxide. One atom of sugar was oxidized by, or reduced, five atoms of cupric oxide. Taking 63.4 as the atomic weight of copper and 180 as that of glucose, $(C._{6}H._{12}O.)$, 317 parts of copper would stand equivalent to 180 parts of glucose. Thus one part of copper corresponds to .5678 of glucose, and in calculating the amount of sugar in the blood (or urine) analyzed, the weight of copper deposited had only to be multiplied by .5678 to give its equivalent in glucose.—*Pavy's Croonian Lecture for* 1878, *Medical Examiner.*

DIPHTHERIA.

Read before the Medical Society of North Carolina at its Twenty-Fifth Annual meeting, Goldsborough, N. C., May 15th, 1878.

By Charles Duffy, Jr., of Newbern, N. C.

Mr. President :—Appointed at the last meeting of your Society to open the discussion on diphtheria, I hope I do not misapprehend the import of the word discussion; with my estimate of the word, I hope for a free interchange of thought and opinion, and I shall regard myself simply in the light of the first speaker on a subject, the importance of which demands that its discussion should be participated in by every member of the Society. The wide scope embraced by the whole of the subject, forbids anything like an attempt on my part at an exhaustive exposé. In the present unsettled condition of professional opinion with regard to its many important bearings, I shall be content if I succeed in eliciting your outspoken convictions, based on the careful study of the disease under actual observation.

That we may have an agreement as to what we call diphtheria, we will enquire, 1st. into its determining characteristics. Oertel says, "Distinctive as are the symptoms with which diphtheria appears in its clearly marked forms yet it is quite often difficult in individual cases, to decide if diphtheritic disease be present. In general,one is less likely to err in the diagnosis during an epidemic of the disease than in sporadic cases in which a definite distinction is often extraordinarily difficult. In the whole list of subjective symptoms, there is no single one which would be completely indicative and conclusive in the diagnosis, and just a little possible would it be to give a complete and well defined picture of a diphtheritic attack which would correctly represent every case at all times."—*Ziemssen's Cyc.*, Vol. 1, p. 660.

These words of the renowned German Professor, I am free to confess, have furnished me no little comfort and self satisfaction in many important dilemmas, and I am led by my experience to regard the man, who has had much dealing with diphtheria, fortunate indeed, if he has not at some time vainly exerted himself with this diagnostic problem. Where this is sometimes the case when we have watched a patient from the inception of the disease to its end, how painful is our embarrassment to be confronted by such difficulties at the beginning of an attack, at which time according to the local origin theorists so much depends on the recognition of the disease; for, as they say, the infecting germs may be destroyed before they have had time to enter "the hungry mouths of the absorbents;" and when, more than all, the protective influence of the quarantine, with whatever hope it has to offer, may be seasonably enlisted in our efforts to arrest the progress of the disease.

Professor Flint relates a case, attended by himself and Professor Gilman, in which the disease was first supposed to be puerperal fever; also another case, under the care of Dr. Bogert, in which "the patient for twenty-four hours after the attack presented such an alarming degree of prostration, that death appeared to be averted only by the persistent and free use of stimulants. Pain and tenderness existed over the abdomen, and peritonitis was suspected. After 24 hours, however, the nature of the disease was declared by the occurrence of pseudo-membranous pharyngitis."—*Flint's Practice, 4th Ed., p.* 1011.

Moreover, Professor Flint thinks it probable that, "death may result from the overwhelming violence of the disease at its outset before the diagnostic features are developed."

All observers, since the time of Bretonneau, place a high diagnostic value on the presence of false membrane, which may occur on any of the mucous surfaces, or on any denuded parts of the skin which are exposed to the air. Its predeliction seems to be for the mucous membrane of the mouth, nose, pharynx and larynx. The few replies to a circular letter, addressed to a number of physicians in different parts of the State, asking their views on this subject, seem all to accord to the appearance of this membrane, in the mouth or fauces, the proof positive of diphtheritic infection.

Granting the identity of croupous and diphtheritic inflammations, this corresponds with my own views, so much so, that when in the presence of a suspicious case, I am pressed for a positive opinion as to its nature, I am in the habit of stating whatever suspicions I may have, and at the same time reserving my decision until time enough has elapsed for the exudation to have taken place. Notwithstanding this precaution, I can record many failures in diagnosis, of which the following will serve as a sample :

On the 18th of February, 1877, I visited, with Dr. Smallwood, of Newbern, Nellie Vass, who was sick with diphtheria. The other children (four in number, aged from one to eight years) had been sent out of the house to avoid the infection. The aunt, who had charge of them, thought she had seen "membrane" in the throat of little Bessie, who was accordingly brought home, and put into a room as distant as practicable from the one occupied by Nellie. She seemed to present only the symptoms of catarrhal fever, with a little engorgement of the cervical glands, no membrane being anywhere visible. After five days, no membrane having yet been seen, although we examined her throat two or three times every day, and there being no increase in severity of the subjective symptoms, we concluded it was not a case of diphtheria, and so expressed ourselves ; next day the membrane made its appearance, and the little girl died on the 5th of March. You may object, this was first only a case of common catarrh, and that diphtheria was contracted after her return home. I answer that the symptoms which seemed at last responsible for her death, viz : repugnance to food and vomiting, which were among the first subjective symptoms, never once disappeared, but continued most troublesome and annoying to the end, nor was the appearance of membrane attended by any marked exacerbation of the symptoms.

On the 8th of December, 1877, I visited a negro child (Johnson) 3 years old, who died the same evening with diphtheritic croup. On the 11th, a younger sister (15 months) living in the same room in which the older died, was taken sick with the group of subjective symptoms which make up the probable signs of diphtheria. I visited her daily from this time to the 13th, when, no membrane appearing, and all symptoms being ameliorated, I discontinued my visits, with instructions to the mother to report the child's condition daily until otherwise instructed. On the 14th, she brought me a strip of membrane $\frac{1}{4}$ of an inch wide by $1\frac{1}{2}$ inches long, which she said the child sneezed from its nose. It recovered.

Jan 31st, 1878, Freeman Manwell was taken violently ill with the initiatory symptoms of diphtheria. On the second of February, he was free from fever, sick stomach, and vomiting, appetite returned, and no vestige of trouble remained except slight swelling of tonsils and cervical glands, which were not at all painful, and which, his mother said, was an invariable accompaniment of his frequent attacks of cold ; he continued apparently well till 4th of February, when he had exacerbation of symptoms, and membrane appeared on the 5th. This was a most tractable patient and offered not the slightest resistance to the examination of his throat, which was done time and again.

This pseudo-membrane, which I will notice again under another head, deserves a word here. It is unfortunate that, although we are obliged to wait for its appearance in order that our suspicions as to the nature of the disease may be either confirmed or corrected, it may present itself under a diversity of guises, and may thus leave us still perplexed. Passing over its more distinctive and characteristic forms, in which it is described as resembling dressed buck-skin or wash leather and the inside of bacon rind with clearly cut margins, it not unfrequently presents itself as a thin film, something like white or yellowish tissue paper ; again we find it in patches on the tonsil and palatine arch, differing, very slightly, if at all, in appearance from the mucous follicle ; in fact, it is often a matter of great difficulty, even with the aid of the subjective symptoms of either disease, to draw a dividing line between it and the pultaceous deposit of follicular pharyngitis. All these forms are still further liable to modifications by contact of applications and of vomited matter, by septic and gangrenous influences, so that in estimating the value of this characteristic sign we are obliged to admit that, beyond the well marked cases, there is a border land into which certitude does not extend. Here conjecture may be our only guide, but we owe it to ourselves and to our science, to hedge in this conjecture by every circumstance that can throw light on our difficulty, and to take care that it does not lead us into extravagance in our estimate of remedies employed, or in making up our percentage of deaths and recoveries.

Not the least interesting and important part of our subject is a consideration of its varieties. These, though they may range from cases so mild as to cause scarcely any appreciable constitutional disturbance, to the profoundest septic and gangrenous forms, are so devoid of characteristic features and sharply defined limitations as to render a well drawn picture almost impossible. Yet that there are epidemics that differ one from another in many important particulars, seems to be a well ascertained fact, for how else can we account for the discrepancies of evidence in regard to its manner of propagation, its malignancy, and the estimation placed by various observers on the so-called remedies of the disease ?

The catarrhal, the croupous, the septic and gangrenous forms of Oertel are not unfrequently witnessed in the same epidemic, and sometimes even the same patient will present each one of them in succession in the course of the disease; the same is true of the "mild," the "grave," and the "malignant," also, of the "pharyngeal," laryngeal" and "nasal." These then, the distinctive types of the disease, have reference more to individual variations, the explanation of which may, after further observation, be found in the constitution and environments of the patient ; but beyond this, are there not variations in the epidemic nature of the disease, perhaps distinctive differences in the germs themselves that impress *epidemics* with a characteristic individuality ? In my limited experience with diphtheria I can recall an epidemic, during the prevalence of which, upwards of sixty cases of the disease came under my care, in which there was only one death from septic poisoning ; another peculiarity of this epidemic was the large percentage of the cases beginning in the larynx, and another, its infectiousness ; having begun in a family, it seldom spared an indivual of the susceptible age, and often manifested itself in the person of adults. In another epidemic, the first eleven cases died, nearly all of septicemia, when it seemed suddenly to lose its malignancy and nearly all afterwards attacked recovered. In this epidemic it was not unusual for one or more children, in the same house or room with others sick with the disease to escape ; the membrane in these cases, usually, first began in the nose, and with one exception, no adult was attacked.

Dr. M. J. Moses, (*Virg. Med. Monthly*, Dec., 1875) speaking of differences in diphtheritic lesions, says, "there are two kinds or species of diphtheria, one originating in the system, created by the absorption of an element from external surroundings not in itself a specific poison; the other a local disease due to actual contagion of a specific disease-germ already humanized. That the point of manifestation of evolved diphtheria is the tonsil and velum, and that, when once evolved, the disease becomes local and capable of extension by continuity of tissue, the cell changes, occurring in catarrhal diseases of the air passages, favoring the growth and nutrition of bacteria and micrococci, proved by the microscope to be an element, not of the disease, but of the pseudo-membrane; that from either the evolved or inoculated disease secondary absorption, or septic poisoning may result; that this latter phase of the disease is more to be expected from the directly transmuted disease, than from the disease of evolution."

Here then is a theory, and though it may prove not to be a true one, we have in its favor Professor Huxley's testimony "that even a false theory is sometimes a necessary forerunner and preparation for a true one." In support of the dual or multiple nature of this disease we have, what seems to be, well authenticated cases of origination without the probability of importation or the spread of the disease from patient to patient, variable period of incubation, variable inception, progress, course and termination of epidemics, variability or infectious nature, and variability in death rate. To differentiate carefully the varieties, to study the sporadic cases with a view of ascertaining the conditions without, as well as within the body, that combine to originate the disease, to note the modifications to which it may be subjected in its passage through various constitutions, and that peculiar change of epidemic nature whereby the disease, most malignant at one period of its prevalence suddenly becomes so benign as scarcely to cause an unfavorable symptom, offers a field seemingly full of promise, to the careful observer: and if no more fruitful results were attained, he could, at least, do good service by clearing away some of the embarrassing confusion which has attached itself to the statistics of diphtheria, which at present show nothing but a compilation of contradictory evidence, from which no useful deductions can be drawn.

ETIOLOGY.

The practical question of paramount importance in the etiology of diphtheria seems to me to be, Is it capable of origination and propagation by direct contagion only, or may it be developed spontaneously, having its origin in a miasm generated without the body, or does its infective principle partake of the nature both of a contagion and a miasm?

As this question applies with equal force to all the infectious diseases, it is difficult to separate its discussion from a brief consideration of the modern ideas of the causation of such diseases; which will bring us directly to the "germ theory of disease," or the doctrine of "*contagium animatum*," or "*contagium vivum*." This doctrine had its origin in the middle ages, and was very prominent in the sixteenth century. "Nevertheless, the living causes of diseases could not be found for a long time. The sixteenth century could not find them, nor could the seventeenth nor the eighteenth." The first scientific direction to enquiry into the development of higher organisms was given by Harvey's famous proposition "*omne vivum ex ovo*." Although inexact, as a general proposition, Virchow considers it in opposition to the old "*genatio aequivoca*," the greatest advance that has been made by science in this field. The force of this assertion of Virchow, can best be appreciated when we take into consideration the fact that up to this time it was a common belief that shell-fish, eels, serpents, rats and mice, caterpillars and other insects were the products of spontaneous generation. In our day it is hardly credible that it was once necessary to institute a series of experiments to prove that the maggots seen in decaying meats, were not spontaneously generated by the meat, but were the product of eggs deposited by flies usually noticed buzzing around and alighting on it. These experiments, beautiful on account of their simplicity and thoroughness, were made by Francesco Redi, physician to the Grand Dukes Ferdinand II, and Cosmo III, of Tuscany, and seem to have been the systematic beginning of the great combat for and against heterogenesis, or spontaneous generation. While it would be highly interesting, it would be out of place in a subject like mine to mark the varying fortunes of the struggle as it has continued from the beginning to the present time.

It is sufficient to say that the brightest intellects of our race have been, and are still engaged in it, and that for the elucidation of the subject every branch of scientific investigation has been interrogated. Immense difficulties still remain unsettled, yet many substantial points have been gained. "*Omne vivum ex ovo*" has been abandoned, and the contest is now being waged over "*omne vivum* *e vivo*;" and the most brilliant achievements of its advocates have been won on the field in which Ridi successfully experimented—putrefaction, and its kindred processes—decomposition, fermentation and zymosis.

Dr. Wm. Roberts, after a most beautiful comparison of the course of a contagious fever with the action of yeast in fermentation says, (*Brit. Med. Jour.*, Aug. 11, 1877). "I have already directed your attention to the analogy between the action of an organized ferment and a contagious fever. The analogy is probably real in so far, at least that it leads us to the inference that contagium, like a ferment, is something alive. We know of nothing in all our experience that exhibits the phenomena of growth and self-propagation except a thing possessed of life." And again, "it is more than probable—looking to the general analogy between them—that all infective diseases conform, in some fashion, to one fundamental type. If septic bacteria are the cause of septicemia, if the spirilla are the cause of relapsing fever, if the bacillus anthracis is the cause of splenic fever, the inference is almost irresistable that other analagous organisms are the cause of other infective inflammations, and of other specific fevers." Your familiarity with the labors of Burdon-Sanderson and Lister in septicemia; of Obermeier and Hendenrich in relapsing fever; of Davain, Bollinger, Tiegel, Klebs, and especially of Koch, in splenic fever, renders an analysis of this syllogism of Dr. Roberts unnecessary on my part; yet with all the care and caution of its statement, I must reiterate the warning of Virchow, "prudence still counsels reserve." "The proof is not yet all in."

The exploits of our Dr. Salisbury and of Dr. Klein do not diminish the force of this warning.

In 1868 the micrococcus was discovered in the false membrane, blood and tissues of diphtheritic patients by Buhl, Hunter, and Oertel, (*Ziem. Cyc.*, Vol. 1, p. 588) and has been studied since with patience and industry by a host of observers, who, with singular unanimity, regard it as intimately associated with the causation of this disease. Many experiments have been made to prove that this was the actual diphtheritic germ. Inoculation of a healthy subject with diphtheritic matter, containing these germs producing the characteristic membrane, in which swarms of the same organisms were produced, seemed to furnish strong presumptive evidence in favor of the hypothesis. The seed, as it were, being sown in a bed suitable for its germination and growth, an abundant crop was produced. Eberth went a step beyond these experiments, and found that attempts to inoculate the cornea with membrane deprived of micrococci were unsuccessful in every instance. From these results he formulated his dictum: "without micrococci there can be no diphtheria."

In the parlance of the lawyers, were we to rest the case here, the evidence is almost conclusive that these organisms are the specific cause of diphtheria.

But the other side of the question presents the fact, according to Dr. J. Lewis Smith, (*Virg. Med. Monthly*, Feb., 1875) Dr. L. A. Stimson, (*Pop. Science Monthly*, Feb., 1875) and others, that micrococci are found in *non*-diphtheritic, as well as diphtheritic pharyngitis.

There is also an opinion, which seems to be gaining ground, that micrococci have no other causative relation to diphtheria, than that of mere *associates* of the infective principle, which has not yet been demonstrated. With this estimate of micrococci it is not difficult to understand that Eberth, in separating them from the diphtheritic exudations, preparatory for making his experiments, may have destroyed or removed this infective principle along with them, and, if so, of course the negative results would have followed even though the micrococci were left out of the question.

To put the matter beyond dispute it seems to be necessary to inocculate with germs, separated from their media by filtration, thoroughly washed with distilled water, as suggested by Dr. Charlton-Bastian. Now, could this process be accomplished without detriment to the organisms, it would seem an easy matter to fix their potency in the causation of the disease; and in the event of their successful inoculation, after being thus treated, there could be no dissenting voice as to their causative relation thereto. I am not aware that experiments fulfilling all these conditions have been made, and, until they have been, the question must rest "*sub judice.*"*

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*Some experiments, details of which were read before the *Académie des Sciences*, April, 1873, by M. Onimus, fulfilled very nearly most of these conditions. He placed putrifying blood in a bag made of a dialytic membrane, and immersed the whole in distilled water, which after a few hours was found to be filled with bacteria. Inoculation with the blood produced the usual results, but inoculation with the water caused no septic symptoms whatever. On the other hand the same blood, where subjected to various processes which removed or destroyed the bacteria retained its virulence (*Pop. Science Monthly*, February, 1875). As these experiments were not made with micrococci they are not conclusive as regards diphtheria.

Whatever may be our convictions in regard to the much disputed question, though we may be unwilling to accept bacteria, or any other recognized organism as causal elements, it is difficult to free our notions of the origin of diphtheria from a belief in its intimate association with, if it does not have its being in some kind of entity, whether it be living protoplasm or a chemical body. We cannot logically deal with its specific nature without entertaining some such proposition, which proposition can hardly be invalidated by the difficulty of its demonstration.

Fixing then the specific cause of disease in such entities, the inquiry presents itself, are they ever capable of "*de novo*" origination by any combination of unhygienic conditions within or without the body? Or must they have been born in every instance, as held by the advocates of the doctrine of "*Contagium vivum,*" from a parent organism?

Without any disposition to ignore the brilliant achievements of Pasteur, Tyndall, Roberts and others of the contagium vivum school whose grounds against heterogenesis have thus far proved to be invincible, I will submit a few points held out by some of the strongest opponents of the "*contagium vivum*" doctrine in support of the "*de novo*" origin of germs. Dr. Bastian says (*Pop. Science Monthly Supplement*, February, 1878), "Although the blood and internal tissues of healthy animals and of man, are free from independent organisms and their germs, yet, such organisms will habitually show themselves after death, in the course of a few days, throughout all the organs of one of the lower animals, or, of man—even when life has been abruptly terminated during a state of health. It cannot be said, in explanation of this, that the organisms naturally present in the intestinal canal have been enabled to spread through the body—so as to reach its inmost recesses *after death*—since many of the organisms found are motionless, and others have mere to-and-fro movements of a non-progressive character. The blood again, has ceased to circulate, so that this fluid, germless during life, cannot after death be considered to act even as a carrier. If the organisms themselves cannot make their way through the tissues, and if no carrier exists, they must naturally have been born in or near the sites in which they are found."

Messrs. Lewis and Cunningham (*Fungous Diseases of India,* 1875,

p. 89) in some experiments on living animals with the view of ascertaining whether by interferring with the vascular supply of certain tissues and organs, they could cause organisms similar to those found in animals killed under chloroform, to present themselves: found "that such was the result, and that a kidney, for example, when its artery was carefully ligatured without interferring with its position in the abdomen, would be found, after some hours, to contain precisely similar organisms, where as the other kidney whose circulation had not been interferred with, contained no trace of any vegetation whatever."

Professor Burdon-Sanderson says, (*Trans. Path. Society*, London, 1872), "If a few drops of previously boiled and cooled dilute solution of ammonia are injected underneath the skin of a guinea pig, a diffuse inflammation is produced, the exudation liquid of which is found, after twenty-four hours, to be charged with bacteria. Other chemical agents will lead to the same results, and always under conditions which preclude the possibility of the introduction of infecting matter from without." From these experiments Dr. Bastian concludes, "that an exclusive theory of 'contagion' as the only present cause of communicable diseases is not supported by experimental evidence."

With such evidence in favor of the "*de novo*" origin of germs we are warranted in the conclusion that there is a possibility of the origination of infective diseases without the necessity of the importation of their germs. In support of such a conclusion, in regard to diphtheria, I will introduce some evidence from a clinical standpoint; premising, however, that a better acquaintance with the life-history of such germs, may clear up the difficulties the following instances may put in the way of accepting the "*contagium vivum*" view of the nature of the disease.

In 1863, in an obscure district in Onslow County, diphtheria attacked the family of a man named Jones. All his children (three in number) died within fifteen days; there were no other cases in the neighborhood, and there was no evidence tending to show that it had been imported from any other locality. It seemed to originate and die out in this family. In June, 1876, two children of R. Berry, Newbern, died of diphtheria. With the exception of a case of membranous croup, January, 1876 (so called by the physicians in attendance) there had been no case in town resembling diphtheria for more than two years.

The most careful inquiry failed to furnish any evidence that these cases originated from contagion.

The funeral of the children was largely attended, but no new case occurred till the 18th of the following November. On the 24th of August, 1877, Miss Brinson, aged 14, came to Newbern from the country, eleven miles southeast of town, to visit her relations. On the 25th, while playing on the river-shore she fell into the water, and neglected to change her wet clothes for some hours; on the 27th she had a chill and fever, accompanied by the ordinary symptoms of catarrh. On the 28th, membrane appeared in pharynx and a most violent diphtheria ensued; for some days she was in extreme peril but finally recovered. One of the children of her uncle, at whose house she was, contracted the disease on the 13th of Sept., and died on the 17th.

There had been no case of sore throat anywhere in the neighborhood of Miss Brinson's home in the country, and she made the journey in her father's boat on a wide river where it would seem impossible for her to have come in contact with diphtheritic germs. These were the only cases before or since that have occurred about the locality of her uncle's house in town. On the 8th of September, she was taken to her home where there were five children between the ages of three and eleven, not one of whom contracted the disease although no precautions were taken to guard them against contagion. On the 2d of September, 1877, a little daughter of Mr. Nutting, residing eight miles northwest from Newbern, took the disease and died on the 6th. It was not traceable to any other case, nor did any other of his six children, between the ages of three and twelve, contract the disease, although there was not even an attempt at isolation.

Dr. E. F. Smallwood, of Newbern, writes, "In 1856 I saw and attended three cases of a peculiar sore throat characterized by a membranous exudation, which cases were very severe, attended with difficult deglutition. In one of these cases croupal symptoms supervened. These cases occurred in children from five to ten years of age.

Scarlatina was prevailing in our midst at the time, but these patients had no eruption and no subsequent desquamation. In 1858 or 1859, I was called to visit a lady 35 or 36 years of age, who had been suffering from what she considered ulcerative sore throat for five or six days; deglutition was painful and difficult; when I saw her in the afternoon she could scarcely breathe; she had a croupy cough, and was evidently suffocating. Upon examining her throat I found it covered with a membranous exudation. She lived but a few hours after I saw her. These four cases I should now regard as cases of diphtheria." Dr. Smallwood says there were no cases before or after them, which could have caused or resulted from them, and he believes they originated *de novo*. Mr. Allen, a highly intelligent and observant gentleman, relates the occurrence of four cases of diphtheria in a family of negroes on his lot in 1863.

There were four children in the family, from 3 to 12 years, all of whom died; no other case resulted from these, and it was never known how they originated. It is remarkable that these first four cases and the first three related by Dr. Smallwood, occurred on the same premises, where the last fatal epidemic which recently visited our town, first made its appearance, there being seven years between the first and second outbreak, and thirteen years between the second and third. I do not wish, however, to leave the impression that the third outbreak occurred as mysteriously as the first and second. The evidence is pretty strong that the disease, in the last instance was imported.

Dr. Wood, of Wilmington, writes, "among the first cases I ever heard about, was that of a child of Dr. Cleaveland, of Griffin, Ga. The doctor was stationed at the Marine Hospital where his little boy had the disease in July, 1863. At that time, I am informed there were no cases in Wilmington. The disease had been prevailing in Henry County, Ga., from which place the doctor had brought his family. Three months seem to have elapsed between the arrival of the little patient and his seizure. He was attacked on the 3d of July, and died on the 12th. No other cases originated from his, and this is the opinion of Dr. J. C. Walker, surgeon in charge of the hospital at the time. This is one of the earliest, if not the earliest case of the disease known in Wilmington. Of my own knowledge I have never seen a case of diphtheria traceable to contagion. I have examined every source of error in this opinion, and would be obliged to say, were there no well accredited statements to the contrary; that diphtheria is not contagious at all; but possibly I should modify this statement in view of the revelations now being made by Drs. Sanderson, Braidwood, Beale, Klein and others as to the phenomena of contagium, and say that it does not behave, if contagious, like the contagium of small-pox or scarlatina." And again; "I have seen solitary cases of the diphtheritic variety which stopped short, by dying out in the death of the subject, although there were abundant means of spreading it, and more individuals of the susceptible age within easy reach of the disease element. Many of my bad cases have been among the very poor; in houses with one room, with a limited supply of drinking and other utensils, with rags and filth everywhere abounding, with one common bed for sick and well, with lack of intelligence to carry out instructions as to the avoidance of the contact so dangerous in the well-known contagious diseases, and no way of escape, sooner or later, from a degree of contagion which would unerringly have propagated scarlatina, for instance; in such circumstances, I have seen one solitary case of diphthera, all the other children escaping, but only to be attacked at the next outbreak of the disease in the following fall."

Dr. W. R. Wilson, of Townsville, writes: "While I cannot help, from my reading, believing the disease is propagated by contagion (in the strict meaning of the term) yet in none of my cases could I trace it to that causation. * * * * * * *

I recall now three cases, two adults and one child; all occurring under circumstances particularly favorable to propagation by contagion, and yet they were the only cases in the respective families. The first case, a man about 35 years of age, the father of six children, all crowded in one room, isolation impossible, in fact, one of the smallest children sleeping at night in the same bed with the father. Second case, a negro boy about 8 years old, one of eight children in one room, isolation impossible, using same bedding; and, contrary to my direction, the same spoon used in giving medicine was used by others in eating, (but one spoon in the family.) Third case, though with happier surroundings, a young lady, 18 years of age, was really ill with the disease before she suspected the trouble, or sent for me. During all this time she occupied the nursery of a large family of children, eating and sleeping with them. Now, in all these instances, I naturally feared the spread of the disease by contagion, yet, all three of these cases were solitary ones, and all three occurred under circumstances most favorable to propagation. There was not any doubt as to diagnosis in these cases, in the three instances above related, 21 children were exposed to the disease and none took it."

Dr. John W. Booth, of Tally Ho, writes: "It does not originate by contagion; I never saw a case (of diphtheria) that I thought was probably communicated from one (subject) to another. Saw many single cases in diverse communities, in families of children, none of whom took the disease, but the one, while that could be traced neither to fomites nor personal contact. Willie B., aged 6 years, had it three times in as many months, sleeping in the (same) room with his little sisters, neither of whom had the disease."

And so I might continue to multiply evidence of the same kind collected from various sources, but enough has been said, if not to establish the possibility of the spontaneous origin of diphtheria, to show that many careful observers, with ample opportunities, are strongly inclined to believe in such a possibility; and though they are met with the difficulty that a specific disease is of necessity obliged to have for its propagation a specific germ, equally as great a difficulty confronts those who hold the opinion that it is communicable by direct contagion only; and that is, that they not unfrequently encounter cases which the most rigid scrutiny fails to trace to the probability of importation. It seems to me there is no way out of these perplexities other than a thorough understanding of the life-history of the germs of the disease. Knowing the life-history of the germs of the pine tree, we are not surprised or bewildered at seeing a solitary plant of that genus springing up miles away from its parent source; and so of strange grasses that suddenly make their appearance about our farms, &c., &c. A thorough knowledge of the life-history of our most important grain, enables us to understand that, however essential it may be, something more than the perfect germ is necessary to the production of an abundant yield; essential conditions are, suitable soil properly prepared, the right degree of heat and moisture, and, with these favoring conditions for its health and growth, the plant must also escape such accidents as hail and wind storms, devastating insects, &c. All our most important successes in dealing with malarial diseases, yellow fever, cholera, &c., &c., depend on such knowledge as this.

Unfortunately our knowledge of this part of the subject under consideration is sadly deficient. We assume that there is a germ and that it is propagated by contagion ; but the instant we begin to compare its behavior with that of other well known contagious diseases, a strong divergence confronts us. We find it has no well defined period of incubation, no distinct stages, no definite period of decline, and, more than all, that it is not self-protective. We know, and this comprises about all of our quantitative knowledge on the subject, that the favorite *bed* for its development and growth is in the persons of children between the ages of 9 months and 9 years ; but even this statement may require qualification, for the disease known as "hog cholera," so terribly destructive to that animal, resembles it in many particulars. It seems to be independent of atmospheric conditions, or at least as regards temperature and humidity, season of the year, &c. Soil-soakage has recently been given a prominent place among the factors of diphtheria. Dr. Lewis J. Pilcher, (*Croup and Tracheotomy* in city of Brooklyn, *Proc. Med. Society*, County of Kings, May, 1877,) after reference to a map of the city wherein is shown the "croup districts" by small black squares, says, " every district presents soil conditions of an unfavorable character. This is a necessary corollary of the statement that they are occupied by the dwellings of the poor. Along the water front occupying ground rescued from the river or bay, upon the sites of marshes, now more or less obscured by the filling in process; in valleys that have been the site of water courses where drainage is imperfect—these are the districts that appear so black in the map which has been presented." Dr. Wood's conclusions,* based on observations of the course of the disease in Wilmington for the past few years, are in accord with those of Dr. Pilcher. Now, the little epidemic we have lately had in Newbern, probably due to importation of the disease, completely reversed this order, invading, in most instances, the most highly favored families, and the localities singularly free from the conditions mentioned by Dr. Pilcher. Oertel, while not giving prominence to telluric conditions, speaks emphatically of the baneful influences of crowded tenements, "living in damp dwellings and in rooms on a level with the earth's surface."

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*North Carolina Medical Journal, March, 1878. p. 179.

However difficult it may be to determine the conditions necessary to the life and growth of the diphtheritic germ, that such conditions do exist is a matter of the plainest inference. Analysis of the evidence adduced to show that diphtheria is capable of spontaneous (miasmatic) origination, on the one hand, and that it is due to direct contagion on the other hand, leads to the conclusion that its real place among the infectious diseases is that of the miasmatic-contagious. Regarded in the light of a miasmatic-contagious disease, wherein an essential condition is that the germ must be furnished by an infected person, the maturity and perfection of such germ cannot be accomplished unless it meet with the necessary conditions outside the body.* One of the strongest arguments in favor of the infective matter of diphtheria undergoing an important stage of its development outside the body—as a miasm—is that at a certain period in the career of a most virulent epidemic, it may suddenly lose its malignancy, and instead of—as may have been the rule—the majority of cases proving fatal, it may now be the exception for a case to die, and at length no more subjects are attacked. It cannot be said, as in the case of many contagious diseases, that it dies out for want of subjects to attack, for even though one attack protected from a subsequent one, which is not the case, it is rare for one-tenth of the susceptible population of any village or town to contract the disease during the prevalence of the same epidemic. In its development outside the body it resembles the ordinary ferments, on a grand scale, the atmosphere, round about the infected point, may be compared to beerwort, in which the yeast germs have been sown ; after a variable time activity begins in the fluid, soon reaches its acme of disturbance, and then declines. The food necessary for the nourishment and growth of the organisms has been exhausted; they starve, as it were, and die, leaving only a crop of germs behind them, which must want for a renewal of the conditions on which their development depends, before they, in turn, can be converted into activity or virulence. Singularly illustrative of the truth of such a comparison

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*In the present unsettled condition of the germ-theory of disease, this definition of Liebermeister might, with no great violence to scientific notions be modified so as to include another class of miasmatic contagious diseases whose original germ might be generated *de novo*, outside the body, and afterwards becoming humanized, spread in the manner at present accorded to the miasmatic contagious diseases.

are the following facts related by Dr. L. A. Hanks, of Pittsborough, N. C :

In the family of a man named Cook, diphtheria made its appearance on the 26th of September, 1876. In a few days five cases were developed of which one died.

"The disease here could not be traced to contagion, nor was there any thing in character of soil or drinking water, or condition of houses to account for its origin." * * * * *

Cook left the house and another family named Forshee, occupied it on December 20th, 1876. "There was no fumigation of any kind." * * * On 6th of October, 1877, diphtheria again broke out in the house, and Forshee's five children, aged respectively, 6, 10, 15, 18 and 21 years, all had the disease, and all died, except a girl of 15, who, after a prolonged and almost complete paralysis of voluntary muscles finally recovered. How suggestive of slumbering germs, is that period of immunity, enjoyed by Forshee's family, dating from his entrance into the house to the occurrence of first case of disease,—nearly 10 months! How suggestive of the occurrence of a new supply of the conditions (food) for the germination and development of activity and virulence of the heretofore harmless germs, is the sudden and unaccountable outbreak of the disease, after so long a season of innocuousness, notwithstanding the strong probability that they were in contact with the subjects, afterwards infected, days and weeks and months!

To determine what these conditions are, is the whole of the work that remains yet to be done in this field; the proper treatment will follow as a necessary result of the completion of this all-important work, without which all attempt at curative treatment can be nothing better than guess work, which offers not much better hope of doing good than of doing harm.

The cases of simple pharyngitis, or follicular pharyngitis, that are usually prevalent during an epidemic of diphtheria, and concerning which, it is the habit of authors to warn us lest we mistake them for diphtheria, are worthy of our most careful study.

My own observation of these cases leads me forcibly to the conclusion that they are due to the infective principle of diphtheria, and that they are nothing less than modified cases of that disease. In support of such an opinion, and opposed to the notion that they are non-specific diseases, it is usual, on the one hand, for them to observe a marked identity throughout their course, unless they merge into the graver malady, which they sometimes do so gradually as to resemble more one of the stages of that disease, than a distinct and separate disorder. They moreover bear a striking relation to diphtheria, numerically as well as to extent of territory invaded, whereas, on the other hand, the catarrhal cases ascribed to ordinary atmospheric vicissitudes, as well as epidemics of influenza, vary in every conceivable shape and form, and seem to have no causative relation to diphtheria. At the time of this writing (March, 1878,) we are in the midst of a wide-spreading epidemic of influenza at Newbern and vicinity, which has seemed literally to crowd out the epidemic of diphtheria which immediately preceded it, so distinct are these cases from those of the pharyngitis above referred to, that they cannot possibly be confounded with them.

As to whether diphtheria begins as a local affection of the throat, the system becoming secondarily affected by absorption of the poison, or whether it is primarily a constitutional affection, the throat symptoms being a local manifestation or expression of the same, observers do not agree. Oertel claims to have answered this question in favor of local origin, and he claims furthermore, that the general infection is kept up to the local one. (*Ziemssen's Cyc.*, Vol. 1, p. 577.) Dr. J. Lewis Smith, (*Am. Jour. of Med. Science*, October, 1877.) criticising the revival of this old doctrine of Bretonneau and Trousseau, says it has been productive of "an immense amount of harm" by the bias it has given to the treatment of the disease, and considers it "a great misfortune" that notions like those contained in Sanné's work could not have taken the place of those propagated by Oertel. The reconcilation of these opposing theories, on either side of which an immense amount of evidence for and against has been adduced, may possibly be found in the dual nature of the disease.

The identity or non-identity of true membranous croup and diphtheria, has been for many years a subject of frequent discussion. Pending the report of the Committee appointed to the Royal Med. and Chirurg. Society to investigate this question, it may not be without interest to glance hastily at the salient points of discussion. From a clinical stand-point the differentiation of the two diseases has rested mainly on, 1st, the origin:—diphtheria by contagion, croup by the ordinary causes of simple inflammation. 2d. That in laryngeal diphtheria several days of illness commonly precede the laryngeal symptoms. 3d. That albumen is commonly present in the urine in cases of diphtheria, and 4th, that nervous symptoms which follow diphtheria are not sequelæ of croup. Without reference to the statements of the host of observers for and against these propositions, my own limited experience has furnished evidence sufficient to convince me that these diagnostic differences do not hold. I have seen cases of so-called croup, followed in a few days in the same family by diphtheria, and the most of such cases as I have regarded as croup, have been sick with some apparently trifling disorder before the croupal symptoms declared themselves. Such cases have sometimes exhibited the presence of albumen in the urine. Sir Wm. Jenner and others have reported cases of croup followed by nervous symptoms. Dr. J. B. Hughes, of Newbern, a believer in the non-identity of the two diseases, says his late unfortunate experience has modified his views, and that he does not now believe he can distinguish laryngeal diphtheria from true croup; he has seen cases of croup and diphtheria in the same family at the same time. Dr. Pilcher's diagram, *loc. cit.*, showing deaths from diphtheria and croup from 1870 to 1876, gives for diphtheria in 1870—109 deaths, then followed a gradual increase till 1875, when they numbered 965, declining in 1876 to 810 deaths.

The croup wave shows a corresponding flow and ebb, in 1870 there were 210 deaths from croup, the wave steadily increasing reached in 1875, 424, and in 1876 down to 407. Dr. Young, of Oxford mentions two cases of membranous croup which he says were free from diphtheritic nature. "No diphtheria in neighborhood, no membrane in fauces," one recovered the other died. As an offset to these cases I can refer to numbers of solitary cases of unmistakable diphtheria (no others for miles around) and again to the second child of Johnson, referred to in another section of this report, in whose fauces no membrane at any time could be seen; nevertheless, on the subsidence of the disease a cast was sneezed out of the nose. The character of the membrane is said to differ in the two diseases, the diphtheritic membrane being of a fibrinous nature, and that of croup corpuscular.

Mr. Jabez Hogg, President of London Microscopic Society, lays stress on the dense and compact nature of diphtheritic membrane, and on its firm adherence to the subjacent membrane, but he does not mention the fact that this difference in its adherence is due more to the nature of the mucous surface from which it is evolved than to differences in the nature of the false membranes themselves, it being an established fact that false membranes of whatever nature, do not adhere to the larynx and trachea so firmly as they do to the lips, tongue, pharynx, nasal fossa, vulva, &c. Apart from these facts it is significant that the histological characters given to diphtheritic membrane by Senator and Wagner* are assigned by Boldyrew and Nassiloff to croup, yet, all four of these observers agree in their opinions that the two diseases are distinct. The *Lancet* (Jan. 30, 1875) after reviewing these arguments, states : "Thus neither any one of these symptoms, nor any combination of them, can be relied on as affording grounds for separating the two diseases." Steiner (*Ziemssen's Cyc*. Vol. 4, p. 234) says : "Indeed, there are many good reasons for supposing that these two affections are only varieties and modifications of one and the same process, which, in consequence of special influences and collateral causes, as yet imperfectly understood, makes its appearance at one time as croup, at another as diphtheria; now in a sporadic form, now as a widespread epidemic, now as a primary, and now again as a secondary affection."

It is well, however, to bear in mind that the Health Boards of Glasgow, Dublin, Belfast, Brussels, Pesth, Vienna, Paris, Naples, Berlin, Breslau, Amsterdam, Copenhagen, St. Petersburg, Alexandria, Milan, as well as most of those in England and in this country, report diphtheria and croup under different heads. (*Am. Med. Bi-Weekly*, March 30, 1878.)

The questions of disinfection, fumigation and isolation involves a series of secondary questions, the difficulties of which, in the present state of our knowledge on the subject, well-nigh excludes them from discussion. We know what will destroy micrococci, but we are not sure they are the essential elements of the disease; and, granting that we find an agent that will destroy the veritable entity, known or unknown, we are not sure that it has not an unfailing source (atmospheric or telluric for instance) that will supply the living germs as fast as we may destroy them, and so neutralizes our efforts; we do not even know what are carriers of the contagion or

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*Oertel represents Wagner as endeavoring "to prove that both were one and the same disease." *Ziemssen's Cyc*. Vol. 1, p. 577.

infective principle. If we isolate we do not know how long we must wait for the germs to die a natural death, and so render it safe to bring back the child to the place from whence we sent him. My observation of the influence of disinfection and fumigation can be told by the relation of a few facts. The last death from diphtheria at Mr. Allan's house was on the 5th of December, 1876. The house was vacated and the family did not return till the last week in January, 1877. The house had been thoroughly fumigated with sulphurous acid gas; had been cleaned by scouring and scraping walls and floors; bed clothes, wearing apparel and carpets had been destroyed; such of clothing, furniture and carpets as had been kept, were washed, then saturated with carbolic acid and alcohol, and packed up and afterward kept for days together in the sunshine and air; white-washing was freely done. The first case at the house of Mr. Vass (Mr. Allan's next-door neighbor) exhibited first symptoms of the disease on 12th of February, 1877, two months and seven days after the last death at Mr. Allan's house. This child visited Mr. Allan's soon after they returned. The next case at Mr. Vass' died on the 7th of March, 1877. His remaining three children, who had been away from home seven weeks returned on 6th of April. In the meantime, all the clothing, beds, carpets, &c., that were not destroyed, were packed in solution carbolic acid and alcohol, and afterwards spread out and kept for weeks in the air and sunshine. Walls and floors were saturated with chloride lime solution and while wet, sulphurous acid and chlorine gases were freely liberated in the rooms; so thoroughly were they fumigated that red strings hanging about the rooms were bleached by the action of the gases; the house was then well aired, paper pulled off and walls whitewashed and painted. The third child was taken on 16th of April, ten days after her return; all the above mentioned cases died. These results are a sad commentary, on the efficacy of the means resorted to, to arrest the spread of the disease, and bear a remarkable contrast to the instances, referred to in another part of this paper, where no effort was made in this direction, and where numbers of children of the susceptible age were exposed in the most reckless manner and yet escaped the disease.

The prognosis of diphtheria, like all the other divisions of the subject, is involved in all manner of discrepancies of opinion. It would be simply folly to attempt to make up a useful summary out of the variety of statement in this respect.

From the assertion of many physicians that they never lose a case of diphtheria, to that of others that almost all their cases die, every shade of variation occurs. The only rational conclusions that can be drawn from this confusion of statement is that there is every shade and variety of tendency, intensity and malignancy of the disease. Just here we might well emphasize the warning of Sir John Cormack that it is "not safe to found our treatment of diphtheria only upon what we ourselves may have seen and done. A practitioner may have seen in some particular locality, or in some epidemics, nothing but recoveries; * * * * he may be inclined to attribute the successful issue of his cases to the treatment which he pursued. Unless he be conversant with the experience of others, as with his own, he may slumber long under this delusion, but the time may come to him, as it has come to others, when in spite of his cherished remedies, local and general, he will see a large proportion of his cases perish." (*Brit. Med, Jour.*, August 29, 1874.) The milder forms of diphtheria, described by Oertel as the catarrhal, are, as a rule, not usually fraught with so much danger to the patient. The principal danger to be apprehended from it, is the possibility of its invading the larynx, thereby causing stenosis of that organ. A very large percentage of all cases, either beginning in or extending into the larynx are fatal, even when tracheotomy has been judiciously employed it does not seem too high an estimate to place the percentage of deaths at 75 per cent. The septic and gangrenous forms are scarcely less fatal. Professor J. Lewis Smith, (*Am. Jour. Med. Science,* October, 1877) in stating the causes of death in diphtheria, gives the first place to diphtheritic blood poisoning. 2d. Probable septic blood poisoning, produced by absorption from under surface of the decomposing pseudo-membrane. 3d. Obstructive laryngitis. 4th. Uremia. 5th. Sudden failure of the heart's action, either from anemia and general feebleness from granulo-fatty degeneration of the muscular fibres of the heart, which is liable to occur in all infectious diseases of a malignant type, or from ante-mortem heart clots. 6th. Suddenly developed passive congestion and œdema of the lungs, probably due to feebleness of the heart's action, or to paralysis of the respiratory muscles.

Symptoms of grave import in prognosis are persistent nausea and vomiting, disgust for food, extreme pallor, sanious discharges from the nose or profuse hemorrhages from the site of the membrane, albuminuria, difficult breathing. In such cases as tend to terminate in death by blood posioning, the pulse is usually feeble, and very frequent, till a short time before death, when it not unfrequently declines from 130 or 140, to 60 or 80. If, however, the patient assumes the sitting posture it rapidly runs up, sometimes to 160, and then down again to 60 or 80 when recumbent position is resumed. In a number of cases where I had opportunity of observing this peculiarity of pulse, the patient usually died in from 3 to 12 hours. Sometime ago I had begun to regard such cases as those in which membrane first made its appearance in posterior nares as invariably fatal ; but a more extended experience corrects this notion ; several cases beginning in this way having since recovered; however, when the violence of the local lesion is concentrated in this cavity, the probability of recovery is diminished thereby. Finally, in the most desperate cases absence of nausea and vomiting, and the ability to ingest and retain plenty of nourishment, stimulants, &c., will encourage us to persevere in our efforts and to hope for a favorable termination of the disease.

A consideration of the effect of the diphtheritic poisoning on the various organs of the body, as also of the sequelæ of diphtheria would lead us far beyond the intended limits of this paper, which will now be brought to a close by a brief notice of the treatment of the disease.

In our lack of knowledge of the conditions on which diphtheria depends for its propagation, we are at a loss for specific rules for the prevention of the disease.

It is well, however, when practicable to send all children of the susceptible age away from infected districts, to attend to the enforcement of such hygeinic measures as will best promote the sanitary vigor of those most liable to its ravages. Premises should be thoroughly drained and kept clean; apartments properly ventilated; frequent white-washing of fences and trees under pinning of houses, &c., should be done; drinking water should be carefully guarded against contamination; waste-pipes and sewers should be kept in order; we should impress upon parents and guardians the necessity of attending carefully to the death of children during the prevalence of an epidemic. If one should be sick from any cause, try to make him as well as soon as possible. Let him be taught, while there is yet time, to gargle his throat with salt and water; it may be a useful lesson to him, if it does not serve to harden the fauces and thereby diminish his susceptibility to the disease. Whiskey may also be given for its prophylactic influence, and it may be well at the same time to accustom him to submit quietly to the examination of his throat.

When the disease has declared itself I do not know anything that will surely modifiy its course. I am more and more disposed to rely on whiskey, or some other alcohol in large quantities, from the very beginning of the disease. Quinine, iron, and chlorate of potash would probably receive the endorsement of a larger number of physicians than any other medicines.

Quinine in large doses is almost universally employed for its intipyretic influence, and some claim for it the power of destroying bacteria ; a good microscope in the hands of almost any observer will prove the fallacy of this belief, as the germs taken from the false membranes will be found to flourish and multiply in the solution, if free from excess of acids.

It cannot be denied, however, that quinine fulfils many important symptomatic indications of the disease,and sol. mur. tinct. iron and chlor. potash. The manner of their administration, quantity, &c., must be left to the discretion of the attending physician. The vast array of the so-called remedies, that have been paraded through the medical and secular prints, are hardly worthy of notice, not one of them, so far as I know, having fulfilled the promises made by its special advocate.

In the present state of our knowledge of the subject, the only rational plan to be adopted in the treatment of the disease is, barring such cases as tend to recovery without treatment, to study carefully the tendency to death in any given case, and direct our efforts to combat that peculiar tendency. For the diphtheritic and septic blood poisoning, failure of heart's action, and passive congestions, alcoholics, quinine, iron, ammonia, &c., would seem to be specially indicated. For uræmic symptoms our efforts should be, to promote the action of the kidneys, for this purpose, we might try digitalis, and, failing in this direction, we must invoke the vicarious action of the skin. For obstructive laryngitis we must try emetics, preferably yellow sulphate of mercury, or alum or sulphate of copper—together with inhalations of lime-water, lactic acid, acidulated solutions of pepsin, &c., by means of a hand bulb, or steam atomizer, or, if this not at hand, by the inhalation of steam, generated in a cauldron or stew-pan, and conducted to the mouth of the patient through a funnel or tube. The careful feeding of the patient is a matter of prime importance; meat juice, milk and eggs, followed by a little pepsin, should be given to the full digestive capacity of the patient. The great difficulty which often confronts us, here is the invincible disgust of the patient for all kinds of nutriment, not unfrequently the stomach rejects every thing we put into it, we may then try the bowel; but we often meet with the same difficulty with this organ; we have still left the skin, for lard and alcohol, and the lungs for oxygen, ammonia, &c.; but the blood may refuse to carry nutriment and medicaments and so our resources are at an end.

Local applications are useful chiefly for soothing and cleansing purposes, it is true they may exert some curative influence by their sedative and astringent action, and it may be by their power of destroying the micrococci, and dissolving the membrane. Such powerful applications as the stronger acids, nitrate of silver, &c., are now not generally employed by those physicians who have had most experience in the treatment of the disease; in fact they are usually mentioned by them only to be condemned. Even such observers as cling to the local origin theory, frankly admit, that after the membrane has formed, even when in sight and in easy reach of applications, it is impossible to destroy such entities as are protected by the superimposed layers of membrane, and that much harm may be done by the mechanical and chemical irritation of the tissues round about the surfaces covered with membrane, and, therefore, promote rather than hinder its spread.

Oertel predicts (*Ziemssen's*, Vol. 1, 673) "that the unfavorable results which have been attained on all sides by cauterization, more or less energetically practised, must put a stop to this procedure, even if in its stead we should be obliged to resort to the opposite, the purely expectant and symptomatic treatment."

It is astonishing, notwithstanding the knowledge of physicians of the impossibility of applying caustic to the entire surface liable to be attacked by diphtheria, and that when applied to the thick, hard membrane, which often covers such surfaces, it can have no manner of influence on the diseased tissues beneath it, that many insist on its power, to arrest the disease. Granted that it *can* be smeared over the entire surface required to be touched, and that there is no thick leathery membrane to intercept its curative influence, there is a protective coagulum formed by the contact of the caustic itself, which will shield the organisms contained in the little depressions on the surface, from any action of the medicine, and so leave them to continue their depredations unmolested in spite of attempts to destroy them.

If these objections to the use of nitrate of silver hold, when the disease is viewed from a local origin stand-point, how utterly absurd is the belief in its power to cure an affection of the throat, which, as held by many, is simply a manifestation or expression of a previously existing constitutional disease?

The applications that seem to be best suited for most conditions of diphtheritic pharyngitis are tannin and glycerin ʒ i. ad ℥ i.; sol. carbolic acid 20 to 30 grs. ad ℥ i.; hydrate chloral solution 10 to 20 grs. ℥ i; spts. turpentine; kerosene; sol. chlorate potash xx gr. ad ℥ i., etc., applied with camel's brush or sprayed into the throat with atomizer; or, when the child can be made to gargle the throat, they may be diluted properly and used as gargles, or injected into mouth and throat with face held downwards. Mild solutions of carbolic acid may be injected into the nose; chlorine water, bromine in brom. potass. solution have been praised for their beneficial effects; and so hypo. sulphite of soda. Inhalations of steam as recommended by Oertel cannot but be beneficial, as well for its soothing effect on the inflammation, as for its softening influence on the membrane.

In the employment of these measures it is well to guard against a reckless waste of the strength of the child, and to see that we do not contract the habit of believing that our little patient has been benefitted, when, after having passed through the ordeal of an application he lies exhausted, panting and perspiring from his struggles to resist us.

Tracheotomy has not been successful in my hands; my cases, however, should not be allowed to vitiate the statistics of the operation, as it was done in every instance as a last resort, when the opportunity for its employment with the probability of benefit to the patient was lost; prejudice of parents against the operation was mainly the cause of delay. Against my five unsuccessful cases, I would place five operations done by my father without a single unsuccessful result. These, however, were done for foreign bodies in the trachea and larynx, and so are useless as statistics of operations done for membranous laryngitis, but valuable in an estimation of the part the operation, *per se* may have had in the death of the patients when freed from the influences of the disease, which necessitates its performance. M. Roger said (*Brit. Med. Jour.* May 9, 1874). "In the hospital, Sainte Eugenie * * * there are at least 500 cases (croup) annually * * * tracheotomy is performed on 200 to 300 subjects annually, most of whom die soon after the operation. In the face of such unfavorable results the question suggests itself whether the operation is justifiable. To this M. Roger replied, that even if we cannot save life we can always afford temporary relief. But tracheotomy to be successful in croup must be done early, that is, before the disease extends to the bronchial tubes, and before the patient is exhausted. * * * Tracheotomy, which was formerly but rarely practised, is now an every day operation, and the cures thus effected are estimated at twenty to twenty-five per cent."

Professor Spence, Surg. in ordinary to Queen in Scotland, in an address before the Brit. Med. Association (*Brit. Med. Jour.*, Aug. 14th, 1875) said, "I have now performed tracheotomy for simple and diphtheritic croup 103 times, and saved 34 out of that number, or an average of about one life saved in three cases; and it must be remembered that at first I only operated as a last resort, and even yet I do not see my way to operate quite as early as some French surgeons seem to do. I think, however, there should be no delay when the character of the breathing, and the contracted state of the thoracic parietes, show that the lungs are not being distended with air. By operating early we avoid the risk of œdema, or congestion of the lungs, and of the effects of non-oxygenized blood circulating in the brain."

He warns his young brethren against the discouraging results of operations, assuring them that though they may have 5 or 6 fatal cases in succession, if they persevere the average success will come.

In an article on tracheotomy in diphtheria and croup in the January, 1877 number monthly abstract *Med. Science*, copied from *Med. Times and Gazette*, November 26, 1876, an inquiry instituted to show there is "a fair proportion of recoveries after the operation," 89 cases of unmistakable croup and diphtheria were collected from "hospital and private practice, in which tracheotomy was performed; and out of these 36 recovered and 53 died, two patients out of every five operated upon recovered." Dr. Lewis S. Pilcher (croup and tracheotomy in city of Brooklyn. Trans. Med. Society, County of Kings, May, 1877,) collected 121, mostly unpublished operations, with 24 recoveries, 97 deaths. Dr. Pilcher remarks "It will be seen that in nearly every instance tracheotomy was not resorted to until the patient's condition had become desperate * * a demonstration that even in the last extremity the operation of tracheotomy holds out material hope of recovery." In his estimate of the proper place to be assigned to tracheotomy in the treatment of croup Dr. Pilcher proposes the following questions. To-wit:

1st. What occasions death in croup?

2d. What is the expectation of life in croup?

3d. How will tracheotomy prevent death in croup?

4th. Will tracheotomy in any case increase the danger of death in croup?

5th. What are the objections to tracheotomy?

6th. In what cases is tracheotomy indicated?

7th. In what cases is tracheotomy contra-indicated?

8th. At what time should tracheotomy be resorted to?

After an able and lengthy discussion of these questions in which the conclusions are always in favor of the operation, Dr. Pilcher says: "What other answers can there be, than that *justice to my patient, justice to myself, fidelity to the profession I represent, all unite in demanding that now, early, before the development of conditions which will make my interference but a forlorn hope, tracheotomy should be done.*"

On the other hand, there are many good men who regard the operation with disfavor, and some have even expressed the opinion that it deprives the sufferer of his only chance of recovery, declaring that the reported "successful cases are not membranous croup at all, but laryngitis or laryngo-tracheitis."

Among the difficulties in the way of the operation being done in many obscure country districts is the want of a properly fitting tube to be inserted after the more hazardous steps of the operation have been completed. I have myself been greatly embarrassed by this want, and in such an exigency* resorted to a plan which may be worthy of notice here. A short needle armed with silver wire, as for the operation for vesico-vaginal fistula, held by forceps, was introduced just within the incision into the wind-pipe, and brought out through the integument (care being taken not to include any important vessel or nerve). Being cut the desired length the ends of the wire were brought together and twisted so as to form a loop or eyelet. A similar loop was made in the same manner in the opposite margin of the incision. To one of these loops the end of a small piece of elastic was attached and its free extremity carried round behind the neck and attached to the wire loop in the opposite margin of the incision. By a properly regulated tension of the elastic there was no difficulty in keeping the wound open, and by means of a syringe, to the nozzle of which was attached a piece of soft gum catheter; it was easy at any time to clear out any obstructing mucus, blood, etc., from the air passages. A Politzer's air bag, or the bulb of a Davidson's syringe with the catheter attachment would make a capital exhauster for the same purpose.

A recently reported examination after death immediately following tracheotomy (by Dr. R. C. Brandeis, *Med. Press and Circular,* a notice of which is published in N. C. MED. JOURNAL, March, 1878) demonstrated the possibility of death being hastened by the introduction of a hard rubber canula. In this instance the mucous membrane of the trachea was pushed before the point of the knife instead of being divided. The tube introduced between the walls of the trachea and its mucous membrane completely obstructed the wind pipe and death instantly followed. It has occurred to me that a somewhat similar accident might result from the pushing ahead of the canula, a fragment of false membrane, even where every precaution has been observed in making the incision. The procedure above described has at least the merit of being free from the possibility of either of these accidents.*

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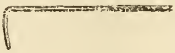
*An operation done by my brother, Dr. F. Duffy, Feb., 1877, in which the calibre of the wind-pipe was too small to admit the smallest tube we had.

In closing this paper I would refer you to a most excellent report by the lamented Dr. John D. Jackson, in the March, 1874 number of Richmond and Louisville *Medical Journal*, where may be found the details of two cases of tracheotomy conducted to a successful issue. As will appear from Dr. Jackson's report, the success of the operation depends in no small degree on the manner in which the after-treatment is conducted.

DR. BAHNSON'S STYLET.

In reporting Dr. Bahnson's remarks on the treatment of epiphora we overlooked inserting the little stylet he mentions, and give it here because of the use it may be to those who follow his admirable methods in treating this troublesome disease.



CEREBRAL LOCALIZATION.

Brown-Séquard declares himself more adverse than ever to the theory of cerebral localization. The symptoms which are attributed to loss of function of the cerebral centres are due to distant irritation. According to him, it is no more logical to attribute a certain part of the brain than to place the sense of sight in the intestine because intestinal parasites can cause amaurosis.—*Progrès Médical*, April 13, 1878—*Clinic*.

Death from Methylene.—A recent death in London from this anesthetic agent only confirms what cannot be too often reiterated, that it is anesthesia that kills such patients, and not anything specifically poisonous in any one of the agents used. Deaths have resulted from every known anesthetic.

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*In view of the fact that even a properly fitting canula cannot but be productive of harm by its irritating presence in an inflamed trachea, any method which has for its aim the diminution of such irritation, must be worthy of our consideration. For one, I would welcome the contrivance of any plan that can usefully supplant the time-honored canula in its routine employment in the operation of tracheotomy.

SELECTED PAPERS.

THE ACTION OF MALARIA AND ITS INFLUENCE ON THE SPLEEN.

By JOHN SULLIVAN, M. D., M. R. C. P., London.

Amongst the many very valuable contributions to medical science published by the justly celebrated Professor Baccelli, of Rome, none appears to me of more interest and importance than an essay read by him before the International Conference held in Geneva, 1877, "On the Condition of the Spleen under Malaria, its Peculiar Venous Circulation, and its Special Function." The view of this special function of the spleen, as essential towards the process of digestion taken by Professor Baccelli although not exactly original, still as based on the influence of malaria is worthy of great consideration. Professor Baccelli directs our attention to two notable facts connected with the digestive function of the stomach.

At the commencement of an attack of marsh fever, we frequently observe that the patient has a voracious appetite, whereas when the action of malaria is repeated or continued, as in marsh cachexia, there is loss of appetite and an obstinate dyspepsia. In the first case the engorged and swollen spleen is soft, and the hyperæmia disappears altogether. In the second case the congested condition of the spleen is permanent or varies but slightly. During the first few days the increase of appetite is conspicuous, and the dyspepsia which succeeds is ascribed by Baccelli, not to any increase of size in the neighboring organs, or to any pressure of the stomach impeding its movements, but rather to some chemical alteration in the process of digestion from an altered condition of the spleen.

Cachectic patients have a great aversion for nitrogenous albuminoid substances. If what is rejected be carefully examined by a lens, the fleshy fibres will be found unchanged, even although they may have existed in the stomach two or three days. Baccelli is of opinion that the spleen, with its peculiar gastro-splenic circulation, has much to do with this perversion of taste, this longing after substances which do not require a great coöperation of the gastric juice in order to be utilized as food. He therefore arrives at the conclusion that the spleen, with its attendant short veins, is to the cells of the pepsine glands what the system of the vena portæ is to the cells of the hepatic glands.

The large curvature of the stomach is connected to the spleen by five or six straight venous canals; these inter-communicate by means of minute little veins, disposed vertically and obliquely behind them. The absence of valves and of any coercive contrivance enables the blood to move on in a double inverse current, and to halt at a given moment either in the stomach, the spleen, or the intermediate vascular system. The veins which pass from the spleen to the stomach penetrate deeply, and the capillaries when injected unite in myriads, especially around the pepsine glands. All this special gastro-splenic venous circle opens into an angle formed by the splenic and left coronary vein. The vein thus formed by their junction passes downwards, then ascends, and, after having been joined by several branches, empties itself into the trunk of the vena portæ as it enters into the liver. The pepsine glands abound in that part of the stomach towards which the veins converge, and appear to be connected exclusively with the venous system.

Injections passed into the large and small venous tracts admirably illustrate the nature of this circle. Whenever an injection has been practised at the junction of the left coronary and anterior splenic vein, the venæ breves and their little branches were seen to be injected at one and the same time; and the fluid would have passed to the pyloric extremity of the stomach if it had not been prevented by a ligature. But if the injection was passed into one of the venæ breves it never took this course; it merely passed, if strong pressure were applied, into another vena brevis. Therefore, the venous blood passes from the spleen to the capillaries of the stomach; from the capillaries of the stomach to the left coronary vein; from the capillaries of the spleen to the anterior splenic vein; and from the anterior splenic and left coronary vein into the main trunk, which opens into the vena portæ.

When the capillaries are well injected they are seen to wind round the pepsine glands, exactly in the same way as the capillaries of the vena portæ wind round the clustered hepatic cells. You might fancy you were examining in the stomach, with the aid of the microscope—examining the exact preparation practised by the late Claude Bernard on the capillaries of the liver.

Carbon enters largely into the composition of pepsine; and this carbon must be derived from venous blood. It therefore, would appear that one of the most important functions of the spleen is to supply to these glands, through the venæ breves, the elements best suited for the preparation of a material so essential towards the process of digestion.

Such being the case, we can understand how the various lesions of the spleen must give rise to various forms of dyspepsia. Although the absence of pepsine may not have an injurious effect upon such alimentary substances as do not need to be dissolved by the gastric juice, but merely to be submitted to the action of the saliva, in order to be fitted to enter the circulation. The study of this gastro-splenic circulation not only illustrates the function of the spleen, but also furnishes a proof of the existence, according to Baccelli, of a small abdominal circulation, the function of which is antagonistic to that of the small pulmonary circulation. If you raise the stomach and disclose the pancreas in its entire extent, and draw it down, you will see the large vein which runs horizontally over it; this receives numerous subsidiary branches, and passes directly from the left side of the spleen. This vein is about half the size in diameter of the vena cava, and forms by its position almost two right angles with the vertebral column. It lies behind the stomach, has no valves, and is liable to be compressed when the stomach is distended. Now, all these wise arrangements are necessary in order to protect the vein from pressure against the vertebral column. The large vein having received some branches from the duodenum, runs on and forms part of the portal system. It therefore unites transversely the liver and the spleen as it passes over the pancreas, and thus is completed the small abdominal circulation. The vein which is formed by the juncion of the anterior splenic and left coronary vein enters the liver. This portion of the circle is connected with that which unites the liver, the pancreas, and the spleen, and so a complete venous circle is formed.

Thus Professor Baccelli is induced to teach that, in accordance with the laws of anatomy, physiology and chemistry, there exists a small abdominal circulation, the function of which appears to be to utilize all the hydrocarbon materials for the organs connected with it.

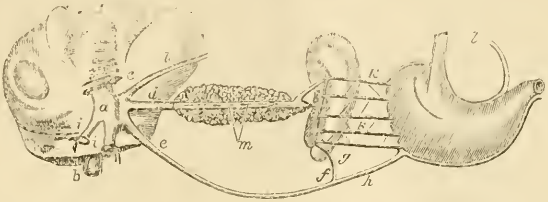
In the same way as it is the function of the pulmonary circulation to eliminate superfluous hydrogen and carbon, in order to fix the oxygen on which the quality of the blood depends, that it might be fitted for the office of combustion, or, to use the words of Baccelli, "of progressive oxidation of the elements on which rests the law of molecular changes and of the process of nutrition. If we examine the secretions special to the organs to which this venous circle is annexed, we find how large is the quantity of hydrocabons they contain.

The pancreatic vein, as it passes between the liver and spleen, is exposed to pressure from its position between the vertebral column and the stomach when in a state of distension. But the spleen covers over one-third of the pancreas anteriorly, which then dips down, and is situated posteriorly, and thus a mechanical contrivance of great interest is obtained, to favor, and yet to protect from, pressure. This contrivance is well ordained in order to supply these organs with a copious supply of blood. The spleen becomes more congested, the better to supply the glands of the stomach through the venæ breves.

The pancreas remains stationary, the numerous venous canals are unable to open into the large vein, and the liver being incapable of receiving any blood from it, there will naturally accumulate the blood which it receives from the vein formed by the junction of the left coronary and anterior splenic veins. And thus the different organs become well supplied with blood for the performance of their different functions. When these offices are completed, then the pressure of the distended stomach upon the spleno-hepatic vein is diminished, and the circulation is equalized. This small abdominal circulation is intended to fix in the above organs all the hydrocarbonized materials required for their respective functions, just as the small thoracic circulation serves to eliminate certain chemical products, and fix the oxygen for the purification of the blood. In the liver, kidneys, and intestinal canal there is a depurative apparatus, formed as well from arteries as from veins, in which but a small proportion of hydrocarbons is formed, derived from venous blood only.

In this abdominal circle Baccelli does not include the mesenteric and superior vena cava, as they properly belong to the system of vena portæ; therefore, starting from the spleen, this circle may be divided into an anterior section connecting the stomach, spleen, and liver, and a posterior connecting the spleen, pancreas, and liver.

Such is an outline of what Professor Baccelli calls the "little abdominal circulation," which I have seen demonstrated by him on two occasions on the dead body in the Hospital of Santo Espiritu in Rome, and of his views respecting the function of the spleen as necessary towards the process of digestion. (A copy of the Professor's diagram I append.) From these views we are led to conclude that whatever cause may tend to impair the texture of the spleen will interfere with its peculiar function, destined to supply to the pepsine glands the materials required for their special secretion. Now, whereas the spleen is specially involved in the morbid process of malarial fever, so is dyspepsia most pronounced when, by the continued and persistent influence of malaria, the texture of the spleen becomes damaged; and in the changes which it undergoes by this action, consist some of the essential characters of fever and ague. The reaction of the system against the infection of malaria generates a periodical non-inflammatory morbid process, the fundamental character of which is intermittence. And as this essential character of fever and ague has been defended and insisted upon by Torti, Lancisi, and former Italian writers, so it is in the present day by the no less distinguished Professor Baccelli, of Rome.



a, trunk of vena portæ, *b*, inferior vena cava; *c*, coronary vein; *d*, spleno-pancreat. hepat. vein; *e*, trunk formed by branch of anterior splenic and branch of left coronary veins; *f*, point of union of same; *g*, branch of anterior splenic; *h*, branch of left anterior coronary; *i*, mesenteric veins (tied); *k*, venæ breves and communicating branches; *l*, outline superior coronary vein; *m*, mouths of pancreatic veins emptying into large vein.

When the founders of medicine—Hippocrates, Celsus, Galenus, etc.—these profound interpreters of nature, defined marsh fever to be intermittent, they must have been guided by their vast powers of observation and experience. And if malarial fever be essentially intermittent by its nature, it cannot be remittent or continued. Still, this intermittence may be obscured and masked, and the fever may take on the semblance of remittent or continued, but it is only sub-continued or pseudo-continued.

The paroxysms which mark intermittence may run one into the other, one scarcely ending before another begins. Or, again, the sub-continued form may arise from an increase in the number of paroxysms in a given time Or, again, an intermittent may acquire an apparent continuity by the extension of the paroxysms, so that if a paroxysm of fever be longer than usual the cold stage of the next access will interrupt or overtake the sweating stage of the preceding one. Thus intermittence may be interrupted or obscured by reason of the intensity or the degree of the poison, by some peculiarity in the individual constitution, or by the complication of some vital organ influenced by climate, locality, and season of the year.

The different modes and combinations in the administration of quinine in the hospitals in Rome depend on the nature of the malarial complication. Arsenic and camphor are considered to be capable of counteracting the paralyzed condition of the ganglionic nervous system ; iron, as well as quinine, as useful for the restoration of the red corpuscles of the blood.

In some autumnal malarial fevers Professor Baccelli recommends to an acid solution of quinine the addition of ferri. pot. tart. and of arsenious acid. In the pneumonic form of malarial fever he prescribes quinine, with some mild preparation of antimony with camphor and henbane. But in the treatment of a disease which manifests itself under forms so varied and so treacherous, much will depend on the judgment and experience of the physician.

The British Islands are providentially free from the many pernicious forms of marsh fever. However, when we reflect how malaria in its worst form rages in many countries in Europe, in the East and West Indies, in the Northern and Southern States of America ; how the records of the medical history of the late civil war in America demonstrate that there occurred in the army, of malarial diseases alone, near upon 1,500,000 cases, with more than 46,000 deaths, we cannot fail in arriving at the conclusion that the study of malarial disease, both as to its origin, its nature, and its treatment, should be regarded as a duty of the utmost importance. —*Medical Times and Gazette.*

CORRESPONDENCE.

OUR PARIS LETTER.

Vaccination in North Carolina during the War—Small-Pox in Paris and London—Gallard's Crusade against Alcohol—Nausea of Pregnancy—New use of the Oxalate of Cerium—Delayed Union after Fracture of the Upper Third of the Tibia—Dr. Peter on Temperature in Pleurisy—Brown-Séquard as the Successor of Bernard—The Great Exposition.

11 RUE NEUVE DES CAPUCINES,
PARIS, May 15th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—*A propos* of the subject of vaccination, which you have discussed in a recent number of your Journal, I trust you will permit me to state what was accomplished in that regard during the war, in North Carolina. Whilst occupying the position of Surgeon-General, I found the people of the State seriously menaced with an epidemic of small-pox. The disease having been introduced by returning prisoners, developed itself contemporaneously in a number of different localities, causing a wide-spread panic and threatening a general devastation. Fortunately I had taken the precaution to send abroad for a supply of reliable vaccine virus—which arrived most opportunely—and, with the concurrence and coöperation of Gov. Vance, I organized in all the affected counties a rigid sanitary police, and a corps of public vaccinators. Under instructions from my office, the sick were thoroughly segregated and properly attended, whilst an almost universal vaccination was enforced. At the end of a few weeks, I had the gratification of finding that the disease had been entirely "stamped out" and that public tranquility was completely restored. I personally supervised the vaccination of several thousand persons; and the reports of my assistants showed that *more than seventy thousand* were vaccinated within the limits of the State. Much valuable information in regard to the whole subject of vaccination and revaccination, the concurrent introduction of other diseases, &c., &c., was collected and stored away for future use; but the unfortunate incident of a capture by a band of raiders of all the stores and records belonging to my department, precluded the possibility of such an employment of these important facts as I had intended.

France enjoys a singular immunity from variola. It is rare to see a death noted from that disease in the mortuary returns of this city. Last year whilst London was ravaged, Paris almost entirely escaped. Although vaccination is rigidly enforced here, small-pox is so little feared, that as yet no separate hospitals for its treatment have been established, and in many instances, those affected with it are received in the ordinary wards.

I have not yet had an opportunity of trying the new treatment of small-pox, by large and repeated doses of quinine; but it is stated that this drug acts admirably in this regard—not alone modifying, but even aborting the disease.

Dr. Gallard, the distinguished physician of *La Pitié*, has entered upon a crusade against alcohol. He believes that it produces a form of gastritis which is peculiar and incurable. Under a prolonged use of alcoholic liquids, the mucous membrane of the stomach becomes softened and finally ulcerates; and, in his opinion, if the drunkard does not die from these causes, he succumbs to a slow but certain inanition. All this may be true, and yet my experience teaches me that climate and race have much to do in developing a taste for drink and in modifying its effects upon the human system. In England, and in certain parts of our own country, a taste for stimulants seems to be inherent, whilst its indulgence is attended with comparative immunity. Here, on the contrary, alcohol is not so much needed or desired, and no man can use it freely without being seriously injured by it. Statistics show that the ratio of disease and death from the use of alcoholic liquors is greater in France than in England and the United States. Even in connection with the practice of medicine this difference manifests itself. A Frenchman does not require and is incapable of sustaining as much stimulation as one of Anglo-Saxon descent. Alcoholic stimulants cannot be administered to foreigners with the same liberality and benefit in this country as in their own. The most unsuccessful practitioners with whom I have been brought in contact abroad, are the disciples of Todd and Bennett—are those who believe that brandy is a sovereign remedy for "all the ills that flesh is heir to." Of course, I have only referred in this connection to alcoholic liquors proper, since the lighter wines are habitually drank by every one here and seem to be a necessity of the human organism.

Space will not permit more than a passing allusion to the controversy which has been going on since the days of Duméril and Demarquay in regard to the physiological action and therapeutical efficacy of alcohol. The observations of Binz, of Bonn, seem to have left no room for controversy in regard to the following propositions, viz :

1st. That alcohol when administered in certain quantities *lowers* the temperature—controls combustion.

2d. That when administered in small and repeated doses, it not only increases the secretion of gastric juice and the movements of the stomach, but *elevates* the temperature—promotes combustion.

3d. That when pure, it is completely destroyed in the organism. and is a "food" in the sense of a substance which supplies the warmth and vital force necessary for the proper performance of the various functions of the body.

4th. That it prevents both waste and the ravages of disease, by sparing the reserve supply of fat in the body, stimulating the nerve-centres, and supplying a material which is at once susceptible of easy digestion and thorough disintegration, and capable of furnishing the condition precedent of nutrition, vital warmth and force to the organism.

5th. That, though an invaluable remedy in disease, it is unnecessary and even injurious in health, since when a sufficient transfer of nutritive material takes place from the food to the blood, the human body is capable of performing all of its legitimate functions without artificial stimulation.

In employing alcohol as an *anti-pyretic*, it is important to bear in mind that when introduced in considerable quantity into the stomach it impairs digestion by precipitating pepsin and inducing gastric irritation ; that for each degree of heat reduced there is an expenditure and loss of vital force and an interference with the normal functions of the blood corpuscles ; that it is capable of producing death directly by shock : and that, when not disintegrated and consumed in the body, a strain is made upon the kidneys for its elimination which may add a serious complication to the malady already existing.

Attention having been called in this country to the treatment of the nausea of pregnancy, by the revival elsewhere of the old plan of cauterizing the os and cervix of the uterus, various remedies have recently been proposed by Continental physicians. Among the most popular, is that of throwing a current of ether-spray upon the epigastrium and along the corresponding track of the spine, as proposed by Lubalsky. He applies ether-spray in this way from three to five minutes, and repeats the operation every three or four hours, with the result of giving permanent relief in many instances. In very obstinate cases, he alternates the ether-spray with that of chloroform—which, according to his statements, acts most potently, not only in the nausea of pregnancy, but in asthma, whooping cough, chorea, and epilepsy. In a recent case which fell into my hands, and which had defied all the ordinary methods of treatment, I succeeded perfectly in calming the stomach, by applying the ice-bag to the spine three times daily, and giving every fourth hour two grains of oxalate of cerium, one-sixth of a grain of codeia and the fourth of a drop of the oil of cinnamon. For more than ten years I have been in the habit of cauterizing *the os and cervix* with nitrate of silver, and then applying half a grain of morphia upon a ball of cotton saturated in glycerine to them, but not with the invariable success which others seem now to claim for it. As an article of diet, I am in the habit of recommending raw-meat, prepared as a salad, and I find that it is readily retained when everything else is certainly rejected.

This reference to the oxalate of cerium reminds one of the new therapeutical use to which it has been applied. In a recent number of the *Practitioner*, Mr. Thomas Clark states that he has used this drug with apparently great advantage in cases of obstinate cough with shortness of breathing. After a few doses of five grains each the most obstinate cases of chronic cough were promptly relieved, the drug seemingly acting as a direct sedative. The oxalate of cerium was, as you know, first introduced by the late Sir James Simpson, in the year 1855, and has ever since enjoyed the confidence of the profession, both at home and abroad. Its value in epilepsy and chorea has been confidently asserted by several practitioners, and I have repeatedly employed it with benefit in certain forms of dyspepsia and chronic alcoholism. It is, however, in vomiting especially in that obstinate form which accompanies pregnancy that it enjoys its chief reputation.

Professor Duplay in a recent clinical lecture has referred to the frequency of delayed and imperfect union after fracture of the upper third of the tibia. He rejects the received doctrine that fractures above the entrance of the nutrient artery unite with less facility than those below it, because of the relations of the vessels which supply the bone, and explains the tardy and incomplete union of the fragments on an entirely opposite theory. According to his teachings, the upper end of the tibia is incomparably its most vascular part—possesses a greater number of vessels and has a larger amount of blood distributed to it than any other portion; and, hence, when a fracture occurs, such an amount of blood is poured out around and between the fragments as interferes after coagulation with the formation of a perfect callus. This explanation is undoubtedly the correct one, and cannot fail to commend itself to the profession.

Dr. Peter has just made an interesting report to the Academy of Medicine in regard to the temperature of pleurisy. He affirms that the temperature upon the diseased side is always notably elevated; that this elevation increases with the effusion and diminishes when that process has subsided; that the decrease of temperature always proceeds *pari passu* with the absorption of the effused fluid; that in cases of pleurisy without effusion the elevation of temperature on the effected side is always less than when an effusion is present, and the return to the normal temperature more rapid; and that the absolute elevation of local temperature on the diseased side is more considerable than the absolute elevation of temperature in the axilla, and precedes it in development. As Professor Peter is one of the most reliable and careful observers in France, his conclusions may be accepted with entire faith and regarded as furnishing a most valuable means of diagnosis in pleuritic affections.

Dr. Brown-Séquard, the distinguished physiologist whose identification with the American profession has reflected so much honor upon it, has been recommended by the Professors of the Medical Faculty of Paris as successor to Claude Bernard. Having been born in the island of Mauritius, he is not a French subject, and he will have to be naturalized before he can accept the professorship. The compliment of such a recommendation is, perhaps, the most distinguished that could be paid to a medical man, and serves to show how liberal and discriminating a spirit really prevails in the world of science. Next to Bernard, Brown-Séquard has done most for the physiology of his times and well merits the reward which has been so handsomely tendered him by his confréres in this great metropolis of learning.

I am sure you will not consider it *infra dig.* on my part, to make the following translation from the *Lyon Mèdical*—a most serious Journal. One of our ablest physicians was recently called upon to employ the vaginal speculum in the examination of a female patient. Having finished the exploration, he was about to remove the instrument, when she touched his shoulder and said very earnestly: "Excuse me, doctor, I have long suffered from pain in the stomach; *while you are there*, please be so good as to tell me what is the matter." The physician's answer is not given, but I suspect it was accompanied by sundry expletives, since the occasion justified them and Frenchmen are proficients in their employment.

The great Exposition was formally opened on the 1st of May, but is as yet far from complete. The largest display in the American section is made perhaps, by Messrs. Tilden & Co., the well-known druggists; while Messrs. W. R. Warner & Co., have the most extensive assortment of sugar-coated pills that was ever seen in this country. So soon as things are fairly placed and arranged, I will visit the exposition and make a detailed report of all that is to be found there of interest to medical men. The Medical Service of the Exposition is now definitely organized. A reception room has been fitted up for patients, and a *salon de lecture* opened for the benefit of visiting professional brethren, in which are to be found all the leading medical journals and most of the newspapers of this country. The Medical staff is composed of M. Ladriet de Lacharriére, chief physician, and of M. M. Audige, Benoit, Grenet, Kubf, Lecoin, Sottas, Testand, and Venet, assistant physicians: while the Commissioner-General of the United States has selected me as the surgeon to the officers and soldiers on duty in his department, with the rank and title of Medical Attaché to the Commission.

There is one word of advice which I would give to all who contemplate a visit to Europe during the coming season, or, indeed, at any time. It is this: in the event of sickness never to be deluded into the mistake of sending for the physician recommended by the employée's of hotels—especially the concièrge or porter—unless perfectly willing to be fleeced and badly treated in the bargain. A most infamous system of commissions—a sort of amicable conspiracy to "take in" strangers and to divide the spoils—prevails upon this side of the water; and it may be generally safely concluded that when a special recommendation of this kind is given it is for a consideration, and that it should inspire distrust. Of course, there are hotels which have no connection with this disreputable system and hotel-physicians of character and attainment; but as strangers are not in position to discriminate in this regard, they had better err on the side of safety, and follow the advice which I have given.

I trust your readers will remember to read this portion of my letter to such of their patients as may contemplate a visit to the Exposition.

Very truly and respectfully yours,
EDWARD WARREN, (BEY) M. D., C. M.

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OUR NEW YORK LETTER.

Dr. Pilcher on Colles Fracture—Urethral Stricture and Dilating Urethrotomy—Obscure Abscess of the Liver, their Association with Hypochondria, &c.

46, WEST THIRTY-SIXTH STREET,
NEW YORK, June 4th, 1878.

The attendance at the Societies, notwithstanding the approach of warm weather has continued good, and the discussions have been of unusual interest. At a late meeting of the Academy, Dr. Pilcher, of Brooklyn, read an extremely able paper on Colles' Fracture of the Radius, probably constituting the most searching and critical inquiry into the history and mechanism of this accident that has ever been made.

The leverage which the carpal bones, as the hand is forcibly extended backwards, exert upon the lower epiphysis of the radius was made perfectly clear not only by description and diagram, but by actual experiments on forearms and hands brought for the purpose; and Colles' fracture was produced at pleasure in each case, by applying a forcible extension and pressure in the same manner in which they are applied in the accidents which ordinarily lead to their production. I shall not attempt to give even an outline of Dr. Pilcher's argument, but must refer your readers to the published paper, contenting myself with reciting briefly the practical influences which are to be drawn from it, with respect to treatment. It would seem that the method commonly employed for the reduction of this fracture are founded upon erroneous conceptions of the precise nature of the disturbance. Dr. Pilcher's method is to continue the extension of the hands backwards, when by pressing downwards on the deformity which always presents on the back of the wrist the broken fragments are easily brought into perfect apposition. No splint is subsequently used, but only a broad adhesive strap and bandage, as a reproduction of the displacement is, from the nature of the parts, impossible, unless by design or renewed accident.

Some idea of the profound impression which this paper produced may be had when you learn that such a veteran as Dr. Frank Hamilton, in his enthusiasm over it, proposed to call the third fasciculus of the annular ligament (for which, hitherto little purpose has been found) *Pilcher's ligament,* as its probable function was so clearly pointed out by this gentleman, and its entanglement in the styloid process of the ulna (which not infrequently occurs in Colles' fracture where the violence of the fall has been great) so graphically portrayed. The venerable Professor, Alfred C. Post, taking his cue from this frank, outspoken tribute of Dr. Hamilton, went even a step farther, and re-baptized the fracture—*Pilcher's fracture.*

Certain it is, that the treatment of this fracture to insure against deformity is now upon a safe basis, and we all must rejoice to be able to throw away our vast number of wrist-splints, so many of which, do much harm and none any good.

Dr. Pilcher's classical contribution will ensure the association of his name with this accident for all time to come.

The discussion of stricture and the relative merits of the different modes of treatment, whether by dilatation, divulsion or internal urethrotomy, will always ensure a large audience in this city, where urethrologists are numerous and occupy no very friendly attitude towards each other. Dr. S. W. Gross, of Philadelphia, came over by invitation to let us know what they are doing in this direction in the city of "Brotherly Love."

He extols internal urethrotomy as superior to dilatation or any other method for all strictures in the penile portion of the urethra; but for deep-seated stricture in the perineal or prostatic portion he prefers divulsion. He acknowledges the influence of strictures of large calibre (slight contractions) in causing serious local and remote troubles. Does not think it necessary to incise the meatus in every case of contraction. Admits that nearly all strictures are located in the penile urethra, and says that many deep-seated *spasmodic* strictures, due to the existence of trouble located anteriorly, and treated as organic strictures by dilatation year after year, and that they would disappear immediately if the anterior trouble were only removed.

Dilatation only, never cures stricture, it may be conducted for many years but never results better than in giving a bougie to the patient to be used for the balance of his life.

Dr. Gouley put himself on record, with characteristic eloquence, against meatomy and internal urethrotomy. He always uses dilatation or divulsion. Thinks urethrotomy a crime, and that the inventors of urethrotomes ought to be killed. When we recall Dr. G.'s excellent instrument a sense of relief comes up to us that he has not yet expiated his own offence in that respect, for, this gentleman who has made external perineal urethrotomy what it is, and has given us the tunnelled sound, cannot be spared from the sphere in which he has made such a brilliant record.

Dr. Otis recited briefly his experience in over 600 urethrotomies made with his dilating urethrotomer. Holding that the urethra is nearly uniform in diameter throughout, he looks upon any encroachment upon its calibre as constituting a morbid condition which ought to be removed. Condemned dilatation as useless, because it never cures; thinks divulsion may be applicable to some cases of deep-seated stricture when hemorrhage is feared. Has never had a death from hemorrhage, or indeed from any complication except extensive vesical or renal trouble and these are limited to two or three cases, which were operated on as a *dernier resort*. With the use of his perineal tourniquet he regards the danger of hemorrhage in any case as reduced to so minute a probability, as scarcely to be taken into account. Has seen a great number of spasmodic strictures in the deep urethra disappear instantly upon the relief of a contracted meatus, or upon incising a stricture of large calibre located in the penile urethra. Many of these had been treated before coming under his observation, by dilatation, divulsion and cutting, under the belief that organic stricture existed. In this way the treatment of stricture had had much obloquy brought upon it. All cases of gleet depend upon the presence of a stricture at some point in the urethral course, which by offering impediment to the flow of urine (it may be inappreciable) or by disturbing the muscular rythm prevents the perfect expulsion of urine ; and if even minute quantities be retained it acts as an irritant setting up local morbid action which may extend deep into some of the follicles and even into the submucous tissue with the effect of maintaining the discharge which invariably baffles all medication. Given a case of gleet the proper course to pursue first is to search for a stricture, which will *invariably* be found ; it may be an apparently trivial one showing but a slight reduction (1-25th to 1-10th of an inch) below the normal calibre of the canal, too small indeed, to offer any noticeable obstruction to micturition, but quite enough to set up the train of symptoms which constitute *gleet*, or still more serious results.

No ordinary steel bougie or sound can discover these strictures of large calibre ; resort must be had to Otis' olive-shaped bulb which locates them with the utmost accuracy. Of course the meatus must be incised if it is not equal to the urethral calibre, otherwise no instrument can be introduced which will be sufficiently large to render appreciable any encroachments upon the urethral canal. The removal of the stricture always cures the gleet.

Dr. E. L. Keyes, a gentleman widely and favorably known as co-author with Dr. Van Buren of a valuable treatise on the genito-urinary organs, also participated in the discussion. expressing his preference for dilatation and divulsion. He also deprecated interfering with strictures until they begin to give trouble. This doctrine was received with no favor, and your correspondent cannot do otherwise than regard it as pernicious. It should be as much the duty of the surgeon to prevent the formation of strictures as to cure them after they have formed. Indeed, the symptoms produced by a stricture may pass almost unobserved until it has proceeded far enough to constitute a very grave lesion. For instance the increase in the vis á tergo, which becomes necessary to force the flow of urine through a contracting stricture, may be and often is so gradual as not to attract attention; in the meantime the force applied may distend the ureters and pelves of the kidneys, to be followed by pyelitis, perhaps, or cystitis, or some associated affection of the prostate. I must regard the advice not to interfere with stricture until suffering demands it, as aiming a serious blow at prophylaxis in this direction.

Dr. Stein, likewise, participated in the discussion urging views from a German stand-point; but as urethrology has confessedly made the greatest advance through American surgeons, to give a summary of what Dr. S. said would scarcely further elucidate the subject. By the way there has come into my hands a pamphlet which is a reprint from a paper read by Dr. Stein, before one of our Societies and subsequently published in 1872 in one of the medical periodicals of this city. It is upon the histology and physiology of the penis, and is beautifully and lucidly illustrated with lithographs from sections, which, a foot note informs us, were made and drawn by the author and his friend, Mr. John Busteed, of this city. I was amazed to find these cuts identical, line for line, letter for letter, with the beautiful illustrations accompanying Stillings great and classical work on stricture, which had appeared about eighteen months before Dr. Stein's paper. We may congratulate ourselves that Stilling conceded the superiority of American work, in securing these cuts from this side of the water, but what shall we say for the failure of the great German author to give the proper credit where it was due. Some one must rise to explain.

At a meeting of the Neurological Society, June 3d, Dr. Wm. A. Hammond read an able and instructive paper on "Obscure Abscesses of the Liver, their association with Hypochondria, and their Treatment." The observations were made upon six cases with melancholia in all. Recently there has been shown to exist a more or less direct nerve communication between the liver and brain, following the course of the vertebral arteries, and through this Dr. H. suggests the possible influence of cerebral hyperæmia in the production of hepatic troubles, including abscess. An abscess once formed would of course react upon the brain, and tend to keep up the hyperæmia, as expressed by melancholia, morbid impulse, dread of death, or insanity, &c. In all the cases the liver was aspirated, sometimes without any other suspicion of the presence of pus, except that furnished by the mental phenomena, and in all but one case the aspirating needle entered an abscess and evacuated 8 to 20 ounces of purulent matter, with the effect of complete relief from all the trouble. Explorating punctures of the liver are regarded as free from danger, or, as one gentleman expressed it, as safe as sticking pins in a pin-cushion, and the use of the aspirator will be far more common in the future. For fuller details in reference to hepatic abscess, and the mode of evacuating them your readers are referred to the New York Letter for March, in which a report is made of Dr. J. C. Davis' classical paper on that subject.

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Artist Doctors.—At the late exhibition of the London Royal Art Academy, Sir Henry Thompson contributed "one of his pleasing little foreign scenes, *Chapel on the right of High Altar, St. Marks, Venice*;" and "Dr. Evershed contributed a horse's head under the title of "*A Study from Life*." From the surgery of the urethra to the artist's pallet, it would be well to shorten the distance in this country.

American Medical Association.—At the late meeting of this body Professor Theopilus Parvin was elected President, and Atlanta, Ga., the first Tuesday in May, 1879, as the place and time of meeting.

Test for Alcohol.—The Doctor: A very sensitive reagent for alcohol, and one that is very simple in its mode of application, has been found by M. Jacquemart. It is a solution of nitrate of mercury obtained by treating the metal with a little nitric acid of average concentration. The action is vigorous and rapid. The mercury is brought in part to the minimum of oxidation; and if a little ammonia be added to the mixture after the reaction, a dark precipitate is obtained, which is darker the more there is of alcohol in the product suspected. Methylic alcohols and similar liquids do not give a dark precipitate with ammonia.—*Med. News.*

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

M. J. DeRosset, M. D., 46 West 36th St., N. Y. } Editors.
Thomas F. Wood, M. D., Wilmington, N. C.

☞ *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our* Journal, *by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with rigor and acceptability. All remittances must be made payable to* DeRosset & Wood, *P. O. Box* 535, *Wilmington, N. C.*

THE COMMERCIAL VALUE OF A BOARD OF HEALTH.

Enquiries at the office of the Secretary of the State Board of Health from the various foreign Consulates about the mortuary statistics, character of sanitary regulations in our sea-port towns, and other matters of such like important nature, have now to be answered in the vaguest sort of terms.

These enquiries are addressed, because of the solicitude these several governments have for the health of men engaged in trade with our ports. An unfavorable report, of course, would damage the trade, and a vague report would create suspicion.

While the truth is, that our bill of mortality will compare most favorably with those of the cities trading with us, there is no bureau of statistics with sufficient means at its command, to produce a tabulated authentic statement.

This is a great oversight in a State of growing commercial importance as North Carolina is. It is useless to establish Boards of

Immigration without something definite and authentic can be said of the health of our cities.

Even in our own State there is a tradition that yellow fever prevails in Wilmington every year, while the forthcoming report of the Superintendent of Health of this city will show that there has not been a single case of the disease known here, and that the death-rate is *very low*. But how is the world to know this ? If a tradition of the yearly prevalence of a pest in our chief commercial town is to be credited for fifteen years after its disappearance, and amongst our own people, are we to expect these foreign countries trading with us to be better informed ? And what will our agents of immigration base their statement of the healthfulness of our State upon, to convince and attract settlers ?

But we need not pursue this argument further to convince thinking people that the State will save thousands of dollars by vitalizing her Board of Health. Gentlemen of the Legislature should not expect two much gratuitous aid from the medical profession of North Carolina. They are already overburdened with the care of the hundreds of indigent people the State cannot provide for, and it will be shameful if they allow them to struggle on without help to carry out that which in other States, has achieved such great results. Vitalize your already existing Board of Health or wipe it off the Statute Books !

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MARYLAND MEDICAL JOURNAL.

We are very much pleased to see this handsome Journal, so much increased in size, in beauty of finish and excellence of material. Our friends, Drs. Manning and Ashby, deserve liberal support from the doctors of Maryland and the South generally, and their prosperous appearance means that they are established upon a steady foundation. This pluck on the part of the Editors should be met with an earnest response from Southern contributors and subscribers, and doubtless it will be.

REVIEWS AND BOOK NOTICES.

NINTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS, January, 1878, pp. 529. Boston: RAND, AVERY & Co., Printers to the Commonwealth.

The State of Massachusetts could have done no wiser or useful thing than in establishing a Board of Health, and appropriating sufficient means to make its influence felt in the civilized world. This is the ninth volume of their reports, and altogether they may be taken as the text-books of other similar Boards for many years to come. Our space will not permit as extended a notice of the volume before us as we would like to make.

The Table of Contents comprises the following heads: *General Report of the Board,* giving an account of the Brighton Abattoir—how it is managed, how garbage is disposed of, how offensive and harmful odors are overcome, and a hundred other useful hints. A summary of the investigation of the *Drainage, Sewerage, and the Pollution of Streams, and Danger from Color-Blindness.*

Dr. Jeffries discovered in Harvard University and the Institute of Technology that very nearly one in twenty of the students were affected with color-blindness. He thinks that one in *fifty,* much more probably one in *twenty,* of the community is color-blind. This defect is congenital. This disease (or defective faculty of perception we are inclined to believe it is) becomes important in those occupations in which color-danger signals are used. Therefore it is almost an imperative necessity to test engineers, signal officers, pilots and steamboat captains.

The subject of *Hydrophobia* received attention, we see, from the Massachusetts Legislature. Last year a law was passed requiring that a statement be issued with licenses to owners of dogs, each one having printed on it "a description of the disease known as hydrophobia."

Diphtheria was a matter of so much public interest that a public law directed the Board of Health to institute such sanitary measures as they deemed necessary for the public health, with reference to house-drainage, &c.

Scarlatina also received the same share of attention to prevent its spread. The expenses of the Board, not including the salaries of officers, was about $5,000.

A table giving the equivalent value of the metric system is also appended.

An elaborate report of eighty pages is devoted to "*Drainage and Health; Sewerage; and Pollution of Streams.*" Accompanying this report is a map of the Drainage Area of Housatonic River, embracing 428 sq. miles, with descriptive text. Each town and village included in this area is specifically treated of, and the faults of drainage and other matters connected therewith plainly mentioned.

A report on *Cottage Hospitals* by Dr. J. F. A. Adams, of Pittsfield is especially worthy of the attention of the North Carolina public at this time. Public attention has for some time been directed to the lavish expenditures made in ornamental architecture, especially for insane asylums. The cottage plan has been successfully carried on in Europe, and is preferred. The advantages are many.

1st. The first outlay is small. 2d. The risks from fires are less. 3d. The risks by the spread of communicable diseases are lessened. 4th. In the case of the insane there is not an overcrowding of patients, or at least, there are not large crowds of insane to annoy those whose nervous system has not passed the stage of impressibility. The front elevation and working plans of a cottage hospital accompanies this paper, and it may not be amiss for the Board of the Insane Asylum for the colored people to take this matter into consideration.

Professor Wm. Ripley Nichols, contributes a paper on the *Filtration of Potable Waters*, adding largely to the heretofore unsatisfactory state of our knowledge of the subject, and must be read to be appreciated.

The remaining articles are *Sanitation of Public Schools*, by D. F. Lincoln, M. D.; *Scarlet Fever*, by A. H. Johnson, M. D.: *Report on the Sanitary Condition of Cambridge*, by Edward R. Cogswell, M. D.; *Health of Towns.* Under the latter head, Dr. A. S. Deane, suggests the following as prophylactic of diphtheria. "Drainage on a broad and scientific basis; the prompt removal by a properly constituted force, of accumulated garbage and filth of every description, to a safe distance from densely inhabited quarters; a vigorous enforcement of municipal ordinances bearing upon nuisances; the cementing of privy vaults and cellars; and a more extended and universal use of the city water"—(i. e., water furnished from the water-works in preference to well water) because he adds in another place, in the localities where the outbreak of diphtheria was severest. "The source of water-supply has been in nearly every instance a well, which, in general, would be found to be shallow, and often situated so as to admit surface-water, and so close to vaults and cess-pools as to be liable to pollution."

The Massachusetts Board of Health is shedding lustre upon the civilization of the century by these valuable volumes, and our law-makers would do well to acquaint themselves with them before they come face to face next winter with the question, "What shall be done for our own State Board of Health?"

THE BREATH, and the diseases which give it a fetid odor. With directions for treatment. By JOSEPH W. HOWE, M. D. 2d edition. 108 pp. D. Appleton & Co.

This little work fulfils the growing demand of the people to know more about themselves. It abounds in good advice to those enquiring the way to overcome the bodily infirmity of a bad-breath, but covers more ground by far than its title would indicate. Physicians can be of great service to their patients by bringing such books within their reach.

WHAT OUR GIRLS OUGHT TO KNOW. By MARY J. STUDLEY, M. D. M. L. Holbrook & Co. 1878. 13 and 15 Laight Street, New York.

The book before us is sure to reach the understanding and gain the sympathy of the readers for whom it is designed. No popular work has before ventured upon the ground of sexual physiology with half the delicacy and good taste. Surely our girls ought to know every word in this book, as a foundation for a more complete knowledge of themselves. Physicians always find that wives and mothers who are well instructed about themselves, escape much of the misery which the ignorant have to endure, as a penalty of their ignorance. This book is sure to have a large circulation. Price, by mail, $1 25.

MEDICAL ANNOTATIONS.

SYPHILIS AMONG THE ABORIGINAL AMERICANS.

Professor Joseph Jones, in the New Orleans *Medical and Surgical Journal* for June has an interesting and convincing article on the existence of syphilis among the Aborigines, demonstrating it by the skeletons found in the ancient burial places in Georgia, Tennessee, Kentucky, Louisiana and Mississippi.

The marks of syphilis in the bones exhumed, have been traced by Dr. Jones from the valley of the Cumberland to the Gulf of Mexico. Some of the specimens were exhibited to the New Orleans Medical and Surgical Association.

The agencies which have, at various times, destroyed vast numbers of the aboriginal inhabitants of America, were *pestilence, matlazahuatl, malarial fever, small-pox, syphilis, ardent spirits, and slavery*.

The supposition had been advanced, that these bones presented merely "traces of periostitis," which were not due to the action of spyhilitic poison, because "it is uncommon to find shin bones of adults belonging to races clad in skins, and with the lower extremities exposed, in which there is not more or less roughness or hyperostasis along the tibial shafts." So far from these evidences of the acion of syphilis being mere "traces of periostitis, and constituting mere roughness or hyperostoses along the tibial shafts," the bones are in many instances thoroughly diseased, enlarged and thickened, with the medullary cavity completely obliterated by the effects of inflammatory action, and with the surfaces eroded in many places. These erosions resemble in all respects those caused by syphilis, and attended by ulceration of the skin and soft parts during life. Furthermore, the disease was not confined to the "tibial shafts;" bones of the cranium, the fibula, the ulna, the radius, the clavicle, the sternum, and the bones of the face exhibited unmistakable traces of *periostitis, ostitis, caries, sclerosis, and exostosis*.

The medullary membrane was evidently involved in many cases to an equal degree with the periosteum; the difference in the appearance of the products of the syphilitic disease being due most probably to the great quantity of fat and other loose tissues, among which the vessels of the medullary membrane run. * * I observed in these bones, and especially in those of the cranium, the various forms of osseous ulceration which have been described by pathologists as characteristic of the action of syphilis, viz: rounded ulcerations with glazed surfaces, and marked hardening or eburnification of the bone beneath; tuberculated ulcerations, dependent not only on periosteal deposit, but upon chronic inflammation of the compact tissue itself; reticulated ulcerations, in which a net-work of periosteal deposit had formed, and which had been perforated by the ulcers subsequently forming and assuming the annular type. That these diseases were due to mechanical injury, or to exposure to cold is evident from the fact that they were almost universally symmetrical in their manifestations. Thus, when one tibia was diseased, the other was similarly affected, both as to the position and nature of the disease. In like manner both fibulæ presented similar evidences of periostitis, ostitis, and exostitis ; this was true also of the bones of the forearm (radius and ulna) and of the clavicle.

The symmetrical manifestation of the morbid process in the osseous system could only have resulted from the action of a poison introduced into the blood.

In answer to the question "Was syphilis indigenous to the Indian Race of North America, or was this disease communicated to the Aborigines by Europeans ? Dr. Jones believes the weight of the testimony is in favor of its American origin. Then with his characteristic learning, he gives us the logical sequence of history to prove it. Among other authors, John Lawson the first historian of North Carolina is quoted, and he thinks that Lawson was the first author (208 years after Columbus' discovery) to state that syphilis was presented to the North America Indians.

[We may state upon authority almost as good as Lawson, that one of the expeditions sent out under Mace, in 1602, to rescue the Raleigh colony, that the pinnace which made land forty leagues southwestward of Hatteras, loaded with "sarsephraze," the then popular remedy for the *lues venerea.*—EDITORS.]

"The diseased bones which I collected" says Dr. Jones "from the stone graves of Tennessee and Kentucky, are probably the most ancient syphilitic bones in the world." And he adds, "this discovery appears to be of great importance in the history of specific contagious diseases, in that it confirms the view held by some pathologists that syphilis originated in the Western hemisphere."

This article will add greatly to Professor Jones' already great celebrity, not only in clinical medicine and physiology, but as an archœlogist.

BOOKS AND PERIODICALS RECEIVED.

Carbolic Acid Injections in the Treatment of Piles. By A. B. Cook, A. M., M. D. Professor of Surgery. Louisville Medical College.

The Vest-Pocket Anatomist. (Founded upon "Gray.") By C. Henri Leonard, A. M., M. D. Price 50 cents. This little work is a remembrancer for the use of students, and its popularity depends, no doubt, upon the service it is to them in preparing for an examination.

Is Modern Education Exerting an Evil Influence on the Eye-Sight of our Children? By A. W. Calhoun, M. D. Professor of the Dis. Eye and Ear. Atlanta Med. College. Reprinted from Atlanta Med. and Surg. Jour., 1878.

Is there a Proper Field for Battey's Operation? By Robt. Battey, M. D. Rome, Ga. 29 pp. From the author.

Investigations on the Effects of Prolonged Muscular Exercise on the Excretion of Urea, Uric Acid, Phosphoric Acid, Sulphuric Acid, and Chloride of Sodium. By Prof. Joseph Jones, M. D., New Orleans, La.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

Mr. Henry Kimpton, of London, offers especial inducements to book-buyers. The facilities of international money orders and regular and careful mails, makes it as easy to get books from London as from our own publishers. Mr. Kimpton's is head-quarters for books, old or new, and an inspection of his catalogues will be profitable. See advertisement.

Buffalo Lithia Water, According to the experience of many physicians, is a valuable adjunct to our means of cure. See advertisement.

University of Pennsylvania.—This ancient institution of learning has recognized the necessity of raising the standard of medical education, and the host of Alumni in North Carolina will not fail to recognize this fact by a liberal support.

Messrs. Sharpe & Dohme, of Baltimore, present in their advertisement in this issue, a tempting list of pharmaceutical elegancies. The physicians enjoy great advantages in having skilled and educated purveyors such as this firm has shown themselves to be.

Our Advertisers at Goldsborough.—We were sorry so few of our friends took advantage of our offer to aid in the exhibition of their goods at the meeting of the State Medical Society, at Goldsborough. Many physicians came expressly to see the exhibit of surgical instruments, and make purchases, but no dealer was wise enough to take advantage of the occasion. We are sure that those who took our suggestion, will find they have aided the extension of their patronage.